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ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND  
RELATED MATTERS.

Hearing held  
8th floor  
180 Dundas Street West  
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

P.S.A. Lamek, Q.C.

E.A. Cronk

Thomas Millar

COSTIGAN

In Ch. Pate

X: Roland  
Commissioner

Counsel

Associate Counsel

Administrator

Transcript of evidence  
for

October 5, 1983

VOLUME 45

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DEATHS AT THE HOSPITAL FOR SICK CHILDREN  
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Hearing held on the 8th Floor,  
180 Dundas Street West, Toronto,  
Ontario, on Wednesday, the 5th  
day of October, 1983.

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner  
THOMAS MILLAR - Administrator  
MURRAY R. ELLIOT - Registrar

APPEARANCES:

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	and Coroner's Office)
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R. BATTY )	Sick Children
M. THOMSON )	
D. YOUNG	Counsel for The Metropolitan
	Toronto Police
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G.P. SADVARI)	at The Hospital for Sick
	Children
B. SYMES	Counsel for the Registered
	Nurses' Association of Ontario
	and 35 Registered Nurses at
	The Hospital for Sick Children

(Cont'd)









APPEARANCES: (Continued)

D. BROWN	Counsel for Susan Nelles - Nurse
E. FORSTER	Counsel for Phyllis Trayner - Nurse
J.A. OLAH	Counsel for Janet Brownless - R.N.A.
S. LABOW	Counsel for Mr. & Mrs. Gosselin, Mr. & Mrs. Gionas, Mr. & Mrs. Inwood, Mr. & Mrs. Turner, Mr. & Mrs. Lutes and Mr. & Mrs. Murphy (parents of deceased children)
F.J. SHANAHAN	Counsel for Mr. & Mrs. Dominic Lombardo (parents of deceased child Stephanie Lombardo); and Heather Dawson (mother of deceased child Amber Dawson)
B. KNAZAN	Counsel for Mrs. M. Christie - R.N.A.
W.W. TOBIAS	Counsel for Mr. & Mrs. Hines (parents of deceased child Jordan Hines)
J. SHINEHOFT	Counsel for Lorie Pacsai and Kevin Garnet (parents of deceased child Kevin Pacsai)





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1 (Commencing at Pg. 1 re computer reasons.)

2 ---Upon commencing at 10:00 a.m.

3 THE COMMISSIONER: Yes, Mr. Lamek?

4 MR. LAMEK: Mr. Commissioner, the  
5 witness this morning is Dr. D.C. Costigan.

6 Dr. Costigan, can we ask you to come  
7 into the witness box, please.

8 DR. DANIEL COLM COSTIGAN, Sworn

9 DIRECT EXAMINATION BY MR. LAMEK:

10 Q. Dr. Costigan, you are a physician  
11 licensed to practise, among other places, in  
12 Ontario?

13 A. Yes.

14 Q. And where do you carry on your  
15 practice?

16 A. I am in Montreal, at the  
17 Montreal Hospital for Sick Children.

18 Q. And in what capacity, please?

19 A. I am a Research Fellow.


20 Q. Doctor, you were born in Dublin  
21 and educated in Ireland?

22 A. Yes.

23 Q. And you attended the Medical  
24 School of the University College in Dublin?

25 A. Yes.

Q. And I won't embarrass you by



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2

listing them, but you won prizes and medals there?

3

A. Yes.

4

Q. And I understand it was there  
that your interest in pediatric medicine developed?

5

A. Yes.

6

7

Q. And indeed, one of the awards  
that came your way at that time was the Colman  
Saunders Gold Medal in Pediatrics, was it not?

8

9

A. Yes.

10

11

Q. You were graduated in 1975 with  
the Degrees of Bachelor of Medicine and Bachelor of  
Surgery?

12

13

A. Yes.

14

Q. And then did general medical  
and surgical internships at two Dublin hospitals?

15

16

A. At one Dublin hospital,  
St. Vincent's Hospital.

17

18

Q. You then spent the years from  
1976, July 1976 to June of 1979 as what in these  
parts we call a resident?

19

20

A. Yes.

21

Q. In hospitals in Dublin, primar-  
ily in the area of pediatrics, did you not?

22

23

A. That is right, yes, I did one  
year of internal medicine.

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Q. And then in the summer of 1979  
you came to Canada and became what is called a  
Post Core, that is to say a senior resident at the  
Hospital for Sick Children?

A. Yes.

Q. And in the year July 1980 to  
June 1981 you were the chief pediatric resident at  
the Hospital for Sick Children?

A. Yes.

Q. You then spent two further  
years at the Hospital, first as a clinical Fellow,  
and then as a research Fellow in endocrinology?

A. Yes.

Q. And you are now, as of the  
summer of 1983 in Montreal as you have told us?

A. Yes.

Q. Doctor, you have published in  
professional journals and presented papers at  
professional conferences?

A. Yes.

Q. And you are a member of the  
Royal College of Physicians of Edinburgh in Pediatrics?

A. Yes.

Q. And of the Royal College of  
Physicians of Canada, also in Pediatrics?







1

2

A. Yes.

3

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6

7

Q. Now, as you know, Doctor, our interest here is in the period which covers your first nine months as chief resident at the Hospital for Sick Children, that is to say from July of 1980 to March of 1981.

8

9

Perhaps you could tell us first though, since you were the chief resident, how one becomes that and what one's duties are as the chief resident?

10

11

12

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A. The situation as I understand it is that one applies for the associate year, which is the final year, or the extra year of the training, higher training in pediatrics. Then one of whatever number of associate residents is approached by usually the physician in chief, Dr. Carver, or I guess there is some input from the Department of Medical Education, and one person is asked to become chief resident for the following year.

18

19

20

21

22

Q. Yes.

A. And I accepted that. The actual role of the chief resident breaks down into, I guess two main areas; there is a medical area and there is an administrative area.

23

24

25

Q. Yes.

A. In both of these areas you







1  
2 enlist the assistance of associate chief residents,  
3 there was a time I think when there was only one  
4 chief resident and no associate residents. So the  
5 situation as regards the administration is basically  
6 in organizing rotations, arranging adjustments to  
7 the overall rotations to suit people's individual  
8 needs.

9 Q. Yes.

10 A. And sort of smoothing the system  
11 for the junior residents and whatever. Then from  
12 the medical point of view it has an educational role  
13 from your own point of view, in that you spend a  
14 considerable portion, you are doing what is called  
15 electives, and you can do various amounts in various  
16 specialities working as a Fellow and so get more  
17 education in those areas. You are also obliged to  
18 do, some time in the Intensive Care Unit and as the  
19 associate resident you are obliged to spend one month  
20 on the general ward.

21 Q. Do you also act in a sort of  
22 quasi consultant capacity to junior residents in the  
23 Hospital?

24 A. Yes. That is the role that if  
25 the people are having a problem during the day, or  
even at nighttime, there is either myself or one of





1  
2 the associate residents there to consult on the  
3 problem and offer our opinion. We also are responsi-  
4 ble for the role of transferring the patients that  
5 we consider necessary down to the Intensive Care Unit  
6 or organizing admissions in an emergency.

7 Q. Now, I understand in addition,  
8 Dr. Costigan, one of the responsibilities of the  
9 chief resident is that when he is on duty, or when  
10 he is on call, it is he who is in charge of the  
arrest team, is that so?

11 A. That's right, he supervises  
12 the arrest team.

13 Q. And is in charge of that team  
14 when it responds to Code 25 calls?

15 A. Yes.

16 Q. And I take it is in charge of  
17 the resuscitation efforts that are conducted by the  
team when they get to the site of the call?

18 A. Yes.

19 Q. I want to come back later to  
20 that aspect of your duties, but I thought we should  
21 mention it at this point.

22 Dr. Costigan, I understand that the  
23 general pediatric residents at the Hospital rotate  
24 through the several divisions of the Department of  
25





1  
2 Pediatrics, does the chief resident also follow such  
3 a rotation?

4 A. The chief resident rotation  
5 really is in the main part, in the elective rotation,  
6 so that if he has a particular interest in one area  
7 or two areas, or three areas, he can divide up the  
8 year into that sort of rotation that suits himself.

9 Q. He makes his own choice as to  
10 how his clinical activity is spread?

11 A. With adjustments for other  
12 people to be present for the same rotation and things  
13 like that.

14 Q. In the period from July 1980  
15 to March 1981, did you have any period of rotation  
16 on the Cardiology Division of the Hospital?

17 A. No.

18 Q. One other thing by way of  
19 general structure and organization, Dr. Costigan.  
20 When a resident is assigned to a particular division,  
21 let us say the Cardiology Division of the Department  
22 of Pediatrics, what is his or her line of responsi-  
23 bility, or reporting, if he encounters a problem or  
24 a difficulty of any kind in the course of his  
25 clinical duties?

A. The beginning, if it is a junior







1  
2 resident or whatever the junior residents usually  
3 have assigned individual patients, and if the nurse  
4 has a problem with one of their patients they report  
5 to that junior resident, and if he is not happy with  
6 it will report to a senior resident who may be  
7 covering that whole side of the floor, or both of  
8 those sides 4A and 4B.

9 Q. Yes.

10 A. And each sub-speciality then  
11 has assigned one of its Fellows to clinical duties,  
12 usually on a month to month basis, or two months on  
13 or two months off, or that type of situation, depending  
14 on the number of Fellows. So usually if the senior  
15 resident is in doubt, or has a concern, he will  
16 report directly to the clinical Fellow. There is  
17 also a staff person assigned, so if the clinical  
18 fellow is having any concern he can report to the  
19 staff resident on for that month.

20 Q. So a reasonable hierarchy  
21 represents that reporting structure?

22 A. Yes.

23 Q. Junior resident to senior  
24 resident, to Fellow, to staff man, to presumably  
25 the head of the division?

A. Presumably, yes.





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Q. And from him eventually to  
Dr. Carver as head of the Department?

A. I am not sure of that point.

Q. Now, is the same true of the  
chief resident when he is working on or involved in  
the clinical activities of a particular service,  
does he follow that same reporting pattern?

A. I am not quite sure I under-  
stand. If he is involved in his elective role as a  
fellow.

Q. Yes.

A. He fits into the position of  
the Fellow.

Q. He plugs in at the Fellow  
level?

A. Yes.

Q. Now, we have also heard that  
the chief resident has relatively easy and regular  
access to the Chief of Pediatrics, Dr. Carver?

A. Yes.

Q. If you became involved, and  
we will come to such a situation in a little while,  
but if you became involved in or aware of a situation  
that seemed to raise problems in a particular  
division of the Department of Pediatrics, such as







1  
2 Cardiology, how would you decide whether to take that  
3 problem to the staff people in that Division, or  
4 to Dr. Carver?

5 A. If it was a situation dealing  
6 with patient management and that sort of situation,  
7 I would go to the physician responsible in the  
8 Cardiology Department first.

9 Q. What kind of problem might you  
10 take directly to the Chief of Pediatrics?

11 A. I guess if I was getting an  
12 unsatisfactory response, or if I was still unhappy,  
13 or I felt it was of a magnitude that he should know  
or ---

14 Q. During the latter part of 1980,  
15 Dr. Costigan, were you aware that there had been a  
16 number of deaths on the Cardiology Wards 4A and 4B?

17 A. Yes, I was aware of those  
18 deaths on the wards, yes.

19 Q. Was that merely a routine  
20 awareness that there are predictably deaths on any  
21 ward, or was there a particular awareness that there  
22 were deaths on the cardiology ward that were a matter  
of concern to some people?

23 A. There was a concern by myself.  
24 When we had started off as chief resident and  
25





1  
2 associate chief resident, we had undergone some  
3 training in resuscitation before we started and  
4 during the initial months we had double coverage,  
5 that there was always two people there for the  
6 resuscitations. When there was some arrests and  
7 that situation, I'm not sure at what time of the  
8 year, but I remember sort of reviewing the situation  
9 again with the individual associate and chief  
10 residents just to see what they were doing was  
11 appropriate. It appeared to be appropriate, the  
12 resuscitation appeared to be appropriate.

13 Q. Did it appear to you through  
14 the late summer, fall, early winter of 1980, that  
15 there was a substantial number of deaths occurring  
16 on the cardiology wards?

17 A. It is difficult to know what  
18 you mean by "substantial". I mean medicine is full  
19 of fluctuations up and down and it is very difficult  
20 to know what has increased or decreased.

21 Q. And I take it you had no  
22 prior experience in that sort of role anyway at  
23 that Hospital to serve as a bench mark?

24 A. I had worked for two years  
25 previously in different hospitals in that same  
capacity, but I had not worked in that capacity in





1  
2 the Hospital.

3 Q. Again I want to come back later  
4 to some of those deaths which were the subject of  
5 resuscitation efforts.

6 Let me take you now to the month of  
7 March of 1981, and in particular to the night of  
8 March 11th to 12th and the death of a patient called  
9 Kevin Pacsai. As at March 11th, were you aware that  
10 there had already been four deaths that month on  
11 Wards 4A and B, deaths on the 6th, 7th, 8th and 9th  
of March?

12 A. My only knowledge was that  
13 there was one death, I think I was involved with one  
14 other.

15 Q. And that was the death of  
16 Jordan Hines on March the 8th?

17 A. Yes.

18 Q. But you did not have an aware-  
19 ness there had been three others that month on the  
ward?

20 A. I can't really remember whether  
21 I was aware at that time or whether I became aware.  
22 later, it is very difficult now for me to remember  
23 when I became aware of it.

24 Q. You don't recall whether that  
25







1  
2 had been a matter of any discussion or comment among  
3 those people involved in resuscitation efforts at  
4 that time?

5 A. At that time?

6 Q. If you have no recollection,  
7 Doctor ---

8 A. No, I really can't remember.

9 Q. Now, in the early hours of  
10 the morning of March 12th, that is to say 2:30,  
11 3 o'clock, 3:30 were you on the cardiology ward?

12 A. Yes.

13 Q. And why were you there?

14 A. There had been arrest, I think  
15 it was Baby Manojlovich.

16 Q. Manojlovich?

17 A. Yes, Manojlovich.

18 Q. That child had arrested in the  
19 small hours of the morning of March 12th?

20 A. Yes.

21 Q. And you had been in charge of  
22 the arrest team on that occasion, had you?

23 A. Yes.

24 Q. Now, we know, Dr. Costigan,  
25 that the Manojlovich baby died about 3:30 in the  
morning, 3:30, 3:35, and I take it that is when the





1  
2 resuscitation effort had ceased?

3 A. Yes.

4 Q. I take it that following the  
5 cessation of the resuscitation effort you wrote the  
6 arrest note in the chart?

7 A. Yes.

8 Q. Prior to leaving the ward,  
9 after having done that, did you have any contact  
10 with Baby Pacsai?

11 A. Yes, myself, and I think a  
12 senior resident who was probably Dr. Kantak and the  
13 cardiology Fellow who was in for the other event  
14 were asked by one of the nurses, she expressed a  
15 concern about Pacsai. So we all walked into the  
16 room where the baby was and the clinical Fellow and  
17 the cardiac resident began looking at the record  
18 so I left them to that and I went down to the ICU.

19 Q. You left the resident who was  
20 on rotation in that area and the cardiology Fellow  
21 to do their thing?

22 A. Yes, I thought they probably  
23 had more expertise in that area, I don't know.

24 Q. Did you understand what was  
25 the basis for the nurse's concern at that time?

A. I cannot recollect now what







1  
2 the concern was, I can't remember now.

3 Q. So you left the ward ---

4 THE COMMISSIONER: You said something,  
5 you think it was ---

6 THE WITNESS: I am just trying to  
7 remember, I can't really remember what it was.

8 MR. LAMEK: Q. So you left the  
9 ward leaving the other two to take care of whatever  
10 the problem was with Baby Pacsai?

11 A. Yes.

12 Q. Did you see the Pacsai child  
13 later that morning, or further into the night?

14 A. Yes, yes.

15 Q. And how did that come about,  
16 please?

17 A. My recollection was that I  
18 was called from - I am not quite sure whether I  
19 returned spontaneously to the ward or whether I was  
20 called from my room, but one or the other, there was  
21 a concern anyway about the baby's condition. I went  
22 to the chart and examined the baby and wrote a note.

23 Q. Doctor, it would obviously  
24 be helpful to you if you had the chart available.  
25 I wonder if the Registrar could let Dr. Costigan  
have the Pacsai chart. It is Exhibit 106,  
Mr. Commissioner.





1  
2 THE COMMISSIONER: Doctor, you saw  
3 the child back in the ward?

4 THE WITNESS: Yes, yes.

5 MR. LAMEK: Q. Now, page 63 of that  
6 Hospital record, Dr. Costigan.

7 A. Yes.

8 Q. There is a note over your  
9 signature?

10 A. Yes,

11 Q. The top left hand side of that  
12 note is "0530 hours", I take it, is that the time  
13 that you arrived at the ward or were summonsed to  
14 the ward, or was it the time you wrote the note,  
15 do you recall now?

16 A. My habit is to write the time  
17 of the event rather than the time I write the note.  
18 No, I can't recall definitely.

19 Q. And the note then records that  
20 you were asked to see Kevin Pacsai because of  
21 anxiety about episodes of bradycardia down to 50 to  
22 60, alternating with rates of 150. You have a  
23 notation as to the rhythm strip, the child was  
24 connected to a cardiac monitor, was he?  
25

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A. Yes, to a little electronic cardiac monitor, could produce pieces of paper that would have a record of the strip if you wanted.

Q. And your note I take it records what you saw in the rhythm strip, or something of what you saw, slight prolonged PR. Now, can you explain that to us, please.

A. The PR is a measure really of the time that it takes the electrical activity to get from the collecting chambers, the atrium to the pumping chambers, which is the ventricles and it reflects the conduction system part of it.

Q. All right. You have under that, is that sinus bradycardia?

A. Yes.

Q. And then query sinus or nodal tachycardia, intermittent two to one block, a delta, meaning what, a diagnosis?

A. Yes.

Q. Sick sinus query dig. toxic  
Plan discuss with ICU Staff, Cardiology Fellow,  
transfer to ICU for observation, hold digoxin.  
That is the note that you made having examined the  
child and looked at his rhythm strip at 5:30 in  
the morning of March 12th?







1

2

A. Yes.

3

Q. Okay. Now, I am interested

4

first in the diagnosis. I take it that is what

5

is known in the trade as a differential diagnosis,

6

you are considering what possible explanations there

7

could be for the observations that you have made?

8

A. Yes.

9

Q. All right. Two things appear

10

to have occurred to you: Sick Sinus - Syndrome I

11

take it?

A. Yes.

12

Q. Or possibly digoxin toxicity.

13

Now, what in particular about this child's condition

14

and your observations prompted you to think of those

15

two possible diagnoses?

16

A. It was based I guess upon the

17

rhythm abnormalities that I saw on the strip and the

18

history of the alternating rapid and slow rates and

19

the evidence of interference with the conduction

20

system as evidenced by the prolonged PR and the two

to one block, the intermittent block.

21

Q. I take it that you recognize

22

that heart block was one of the known symptoms of

23

digoxin intoxication?

A. Yes.

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Q. Yes. Was it that that prompted you to consider digoxin toxicity as a possible explanation for what you were observing?

A. It is difficult to isolate the one thing.

Q. But that was one of the things?

A. One of the things, yes.

Q. Are those rhythm variations and the intermittent appearance of heart block also symptomatic of Sick Sinus Syndrome?

A. Yes, this alternation, this sinus really is responsible for initiating the rhythm or the beat and this variation from rapid to slow and back again is compatible with a Sick Sinus.

Q. I take it that before even contemplating the possibility of digoxin toxicity you were aware either from the chart or from the nurses present that the child was indeed on a regimen of digoxin?

A. Yes, I would presume I checked into that.

Q. Yes. Did you make any review of the dosage that was prescribed for him or any determination as to its appropriateness?

A. I'm sure I looked through the





1  
2 notes and saw what was there but I can't remember  
3 thinking it was too high or too low. I probably,  
4 you know, I just can't remember at this point in time.  
5 My usual format is to do that.

6 Q. But the order that is reflected  
7 in your note at 5:30 is hold digoxin?

8 A. Yes.

9 Q. Was any physician with you  
10 at the time that you examined the baby at 5:30 in  
11 the morning?

12 A. Yes, Dr. Kantak was present.  
13 My recollection is that I discussed this with him  
14 and we spoke about digoxin and that's why I wrote it  
15 in the progress note to hold digoxin because that's  
16 the usual form of events you sort of suggest and  
17 the residents comply.

18 THE COMMISSIONER: Dr. Kantak was  
19 a - Kantak is it?

20 THE WITNESS: Yes, Dr. Kantak.

21 MR. LAMEK: K-a-n-t-a-k, sir.

22 THE COMMISSIONER: He is a resident,  
23 is he?

24 THE WITNESS: He was a senior resident  
25 covering that ward that month and he was on call  
that night.







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MR. LAMEK: Q. Thank you. Did you also discuss with Dr. Kantak your differential diagnosis of Sick Sinus Syndrome and digoxin toxicity?

A. I can't remember the specifics.

Q. Yes.

A. You know, it would be my format to do that.

Q. Do you recall whether he had any other candidates to offer as an explanation for this situation?

A. No, I don't recollect any other.

Q. All right. Now, your note records that you were going to discuss the matter with the ICU staff and the Cardiology Fellow and perhaps transfer the baby to the ICU for observation. What did you do with respect to that intention?

A. Well, I took a portion of the rhythm strip that I had been looking at myself upstairs.

Q. Yes.

A. And brought it down and discussed it with the Senior Fellow in the Intensive Care Unit.

Q. That was Dr. Ann Lynn?

A. Yes.





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Q. Yes. Did you discuss with her the differential diagnoses that you had formulated?

4

5

6

A. I can't remember saying words to her, but yes I would imagine that I did. I mean, that is the whole purpose of the exercise.

7

8

Q. Do you recall whether she disagreed or had any other explanations to offer?

9

10

11

12

A. I don't remember any other suggestions.

13

14

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16

17

Q. All right. Were arrangements made with Dr. Lynn to have Baby Pacsai transferred to the ICU?

18

19

20

21

22

23

24

25

A. Yes.

Q. All right. Now, does your interest in transferring the baby to the ICU suggest that at 5:30, 6 o'clock, whenever it was, on the morning of March 12th you considered the baby to be in a critical condition?

A. It is difficult to judge whether it was one thing or another but there was a collection of things I think, circumstances that caused me to transfer the baby. I was concerned genuinely about the child's condition about the arrhythmia. I was a little anxious because the nurses and everthing were upset and, you know, we





1  
2 had had one arrest previously that night. So, there  
3 was both medical indications and sort of social  
4 indications or whatever.

5 Q. Manojlovich had just died  
6 a couple of hours earlier?

7 A. Yes.

8 Q. That's right. Now, having  
9 made those arrangements with Dr. Lynn, did you then  
10 return to the ward?

11 A. Yes.

12 Q. The Cardiology Ward?

13 A. Yes.

14 Q. And what did you find on your  
15 arrival?

16 A. I had been told that the child  
17 just had an apneic episode or a bradycardia  
18 episode, a slow heart rate associated with the  
19 cessation of breathing for a few moments and had  
20 recovered by the time I arrived.

21 Q. He had recovered from the  
22 apneic spell by the time you got back from the ICU.  
23 Did you attach any particular significance to the  
24 fact that in your absence the child had suffered an  
25 apneic spell?

A. Well, it was a reconfirmation







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that the child needed to be in the Intensive Care Unit. It was an indication of his instability I guess.

Q. All right. Did that spell serve to corroborate either of the differential diagnoses that you had formulated?

A. Because the episode was associated with a recordable heart rate of a bradycardia about 40 to 50 it didn't really lean in either direction to one of the diagnoses.

Q. In any event, the child was then transferred to the ICU?

A. Yes.

Q. Did you take him there?

A. Yes, myself and I think one or two of the nurses.

Q. All right. Do you remember which nurse

A. Yes, I think it was Nurse Nelles and my other recollection was that it might have been the night supervisor as well.

Q. Now, at page 64 of the chart, Dr. Costigan, there is a note headed "Transfer Summary". Is that your note?

A. No, it is not my writing, no.

Q. All right. Do you recognize





1

2

the handwriting?

3

A. It has been a long time.

4

Q. If you don't, it doesn't  
usually matter.

5

6

A. No, I don't recognize the  
writing, no.

7

8

9

Q. All right. But on page 66  
there is some handwriting that I think you will  
recognize.

10

A. Yes.

11

12

Q. Is that the ICU admission  
note that you wrote in the chart at the time of  
the child's admission?

13

A. Yes.

14

15

16

17

Q. All right. And in that note  
you summarize in very short order the child's history  
and the circumstances leading to his transfer and  
admission to the ICU?

18

A. Yes.

19

20

21

Q. Okay. What at the time of  
that transfer, I take it you took the child down and  
got him settled in. Having done that, what was your  
assessment of the child's condition?

22

23

24

25

A. The initial little period  
was involved, as you said, settling and getting





1 things organized, but the child appeared to be  
2 stable during the observation period that we were  
3 there and over the subsequent hour or so the child  
4 seemed to have no further episodes of arrhythmias and  
5 had no apneas and, you know, was clinically stable.

10 Q. Now, towards the bottom of  
6 page 66, Dr. Costigan, you have noted your impression.

7 "Impression - brady arrhythmia secondary  
8 to (1) dig. toxicity, (2) SA node,  
9 sinusal atrial node disease."

10 Now, that interests me because of  
11 course your differential diagnosis was recorded on  
12 page 63. You had those two in the different order,  
13 you have reversed the order. Was there any particular  
14 significance for that or reason for reversing the  
15 order. Was digoxin toxicity assuming a primacy in  
16 your mind?

16 A. Not consciously as such. I  
17 guess the only happenings that had intervened was  
18 the apneic episode on the ward, so, that was the  
19 only possibility that could have changed my mind  
20 slightly.

20 Q. But you have no present  
21 recollection of having been leaning more towards  
22 digoxin toxicity?

23 A. No.

24

25







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Q. Than to Sick Sinus Syndrome?

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A. No.

4

Q. Okay. Now, on page 77 of the

5

record, Doctor, continuation sheet in the Doctor's

6

order section, the top half of the page is taken

7

up with orders written I believe by you. That is

8

your signature?

9

A. Yes.

10

Q. And that I take it is after the

child's admission to the ICU?

11

A. Yes.

12

Q. And among other things you

ordered there a digoxin level this morning?

13

A. Yes.

14

Q. And constant cardiac

15

monitoring. You had already ordered the digoxin

16

be held while the child was back on the ward, had

17

you not?

18

A. Well, yes, I had suggested

in my progress note.

19

20

Q. Was the sample drawn for the

digoxin level at or shortly after the time of the

21

child's admission to the ICU?

22

A. No.

23

Q. When in the normal course

24

25





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2

would that sample be drawn?

3

A. It was usually, like, there was

4

a sort of a routine morning, drawing of the routine

5

bloods, or whatever. So, it would have been drawn

6

in the usual course of events, some time around 8

7

or 9 o'clock.

8

Q. Okay. Was blood drawn from

9

the baby at or shortly after the time of its

10

admission to the ICU for any purpose?

11

A. Yes. I drew some blood for

electrolites and a CBC, Complete blood count.

12

Q. CBC, Complete blood count?

13

A. Yes.

14

Q. You drew that blood from

the child?

15

A. Yes.

16

Q. And how long after his

17

admission to the ICU would that be?

18

A. Not very long. My recollection

19

would be about 15 or 20 minutes.

20

Q. All right. Why did you want

21

a complete blood count and electrolite measurement

22

on this child?

23

A. The concern for the electro-

24

lites was natural because arrhythmias may be associated

25





1  
2 with abnormalities of electrolytes.

3 Q. Yes.

4 A. And the child was on diuretics  
5 at the time and may have had a low potassium. You  
6 know, that was the indication for doing the  
7 electrolytes.

8 Q. And the CBC?

9 A. From the point of view of  
10 the CBC it is just a near indicator of infection  
11 or high white cell count.

12 Q. Now, can complete blood counts  
13 and electrolyte analyses be done at any hour of the  
14 day or night at the Sick Children's Hospital?

15 A. Yes.

16 Q. So, these samples were drawn  
17 and sent off immediately for analysis?

18 A. Yes, yes.

19 Q. When did you receive the  
20 results?

21 A. I cannot recollect exactly.

22 I don't remember getting the CBC results but  
23 I remember getting the electrolyte results probably,  
24 to the best of my recollection, within an hour,  
25 probably less.

Q. And that I take it would not





1  
2 be by receiving the computer print-out that we see  
3 in the chart for those things, you would be notified,  
4 what, by telephone or something of that sort?

5 A. It is my recollection that there  
6 was a telewriter that the people in the Biochemistry  
7 could actually write in the result and it would be  
8 written out on a sheet of paper in the Intensive Care  
Unit.

9 Q. Sort of like a telex machine  
10 or something of that sort?

11 A. Something like that, yes.

12 Q. We know and indeed it is  
13 recorded on the official reports from the Biochemistry  
14 Department, page 83 of the chart, sir, that the  
15 potassium recorded in the sample that you sent down  
16 was 9 milli equivalents per litre with a notation that the  
sample was slightly hemolyzed?

17 A. Yes.

18 Q. As I understand it, a hemolyzed  
19 sample is one in which the red blood cells have been  
20 damaged or have been ruptured releasing potassium  
from within those cells into the serum?

21 A. That's correct.

22 Q. And because there is a high  
23 concentration of potassium within the blood cells  
24  
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themselves that has the effect of elevating the serum?

A. That's right, that's correct.

Q. Potassium?

A. Yes.

Q. And it is the serum potassium that you want to measure, is it not?

A. That's right.

Q. And therefore in a hemolyzed sample you are not getting a true level of potassium in serum, is that correct?

A. No, that is correct, because the hemolysis usually occurs either during the removal through a small needle or through a small clot or something in the specimen or some damage to the actual specimen in transit to the laboratory.

Q. So, in a hemolyzed sample your expectation would be that the level would be artificially high?

A. Yes.

Q. But nevertheless I take it the level of 9 was extraordinarily high?

A. Yes. It is difficult to judge the subjective phenomenon of slight hemolysis in a technician's eye but it was more than I had





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2

experienced with slight hemolysis.

3

4

Q. The normal potassium level  
as I understand it is anywhere from 3.5 to 5.5?

5

A. Yes.

6

7

8

Q. And therefore a level of at  
least twice the normal range was reported to you and  
you weren't sure that could all be accounted for by  
the hemolysis?

9

10

A. Yes, it is not quite the upper  
limit of normal, but yes.

11

12

Q. All right. So, what did you  
do?

13

14

A. So, I immediately took another  
sample and sent it down super start or whatever, down  
to the laboratory for it to be done immediately.

15

16

17

18

Q. All right. Now, while you  
were awaiting the results of that second sample,  
Dr. Costigan, did you have any discussion with a  
Dr. Schaffer?

19

20

21

A. Yes. Dr. Schaffer is the  
Cardiology Fellow and his responsibility that  
particular month was looking after the cardiology  
patients in the Intensive Care Unit.

22

23

24

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Q. And was he like you on night  
duty?





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A. No.

3

Q. How did he happen to be there?

4

A. He had arrived in, I guess he

5

had a busy day, so, he had arrived in at about

6

7 or a quarter to 7 or whatever in the morning.

7

Q. All right.

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A. And that's when I spoke to him.

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Q. At approximately 7 o'clock in the morning you saw him?

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A. Yes.

5

Q. He was a Cardiology Fellow, you say?

6

7

A. Yes, I think he may have had his second or third year of cardiology. He was a quite senior Cardiology Fellow.

8

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Q. What discussion did you have with him about the Baby Pacsai, if any?

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Q. Was there any discussion with Dr. Schaffer about your differential diagnoses of sick sinus or digoxin toxicity?





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A.. Yes, that would have been part of the discussion, really.

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Q. Did he disagree with your thoughts about the explanation?

5

6

A. No.

7

Q. Did he have any other possible explanation to add?

8

A. No.

9

Q. Other than the possible effect of the elevated potassium that you were anticipating?

11

A. Sorry, yes, he had no other suggestions to make, really. I do not know who suggested but he suggested giving atropine - one of us give some atropine, that was really all he suggested.

12

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Q. Was atropine administered to the child?

17

A. Yes.

18

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Q. What was the effect of that? First, what was its purpose?

20

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A. Its purpose really was to increase the heart rate. What it does is it actually increases the rate so it counteracts the bradycardia episodes that we had been seeing. It seemed to stabilize things. The rate increased and the child





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remained stable.

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Q. Was Dr. Schaffer still with you when you received the results of the second sample that you had sent down for electrolyte?

A. It is difficult to remember. I do not think so.

Q. When that sample came back I understand it recorded a level of 7.7?

A. Yes.

THE COMMISSIONER: That is potassium, I take it?

MR. LAMEK: Potassium, yes.

Q. As you had expected, above the normal rate?

A. Yes.

Q. What did you do?

A. Well, I initiated some treatment for this high potassium.

Q. How do you treat high potassium?

A. What we did was, we did a few little avenues, a few approaches. One effective approach is to give an enema of an exchange resin which exchanges sodium for potassium across the bowel wall and that actually removes potassium from the body.





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Q. Yes?

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A. There are a couple of temporizing measures that give you some time until the potassium is actually removed, and that is increasing the concentration of glucose that has been given to the child. The theory is that the child's normal pancreas would respond with extra insulin and the insulin pushes the sugar into cells and the potassium would be taken with the sugar into the cells. They were the type of measures we instituted.

11

Q. You say "we"?

12

A. Well, it is difficult to remember. I guess I wrote the orders and I was responsible for the orders.

14

15

Q. Had you discussed those measures with Dr. Schaffer?

16

A. My recollection is yes.

17

18

19

Q. And the two of you agreed that that was the course to be followed if the potassium came back elevated, as you expected it would?

20

A. Yes.

21

22

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Q. We have taken this - the last time that we were able to fix on was about 7 o'clock when Dr. Schaffer arrived. Can you help us, what time was it by the time you had taken these various measures







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to try to reduce the potassium level in the child?

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A. I think it was - there is a note about 8 o'clock, I think it was an order being given at 8 o'clock - just going through the chart, whether the nurse's records are --

7

8

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Q. Well we can at least know this much Doctor, it was between 7:00 when you first saw Schaffer, approximately 7:00, and 8:45 when the arrest occurred?

10

11

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14

A. Yes. My impression is that there was somewhere in the chart I think the nurse's record of having changed the intravenous to the dextrose and giving the enema was at 8 o'clock. I cannot find that at the moment, but --

15

16

17

Q. Perhaps that does not hugely matter. At least we have a bracket on the time.

Did you ever actually leave the ICU and Baby Pacsai before the arrest occurred?

18

19

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A. My recollection is no. I went out and back to the phone, I phoned the laboratory or things like that, but never left the ICU.

21

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Q. On page 66 of the chart we have looked at your admission note. On page 67 there is a further note over your signature which I take to be the arrest note?





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A. Yes.

3

Q. That, I take it, was written after  
the baby had been pronounced dead?

4

A. Yes.

5

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Q. I do not know whether you have  
had a chance to cast your eye over that, Doctor. I take  
it it reasonably and accurately summarizes the events  
that occurred from and after 8:45 in the morning of  
the 12th of March because the child became apneic,  
severe bradycardia followed almost immediately by  
ventricular fibrillation and your diagnosis was that  
perhaps consideration of the arrhythmias were caused  
by the elevated potassium?

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11

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13

A. Yes, that summarizes it.

14

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Q. You then recorded the admini-  
stration of what, sodium chloride?

16

A. Yes.

17

18

Q. No response to those drugs.  
Defibrillation at 10 joules - bradycardia - mainly  
nodal - is that the same thing as junctional?

19

20

A. It is similar. Yes, it is  
similar.

21

22

Q. Not the usual pacemaking centre,  
is it?

23

24

A. No, it refers, to my knowledge, to

25





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the ventricular node, not to the sinus node.

3

Q. Not to the sinus node.

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We on other occasions have been through this note, Dr. Costigan. I do not think we need to go through it again. Do I put it fairly that the sequence of events that were observed during this arrest was a series of repeated changes from slow bradycardic rhythm to ventricular fibrillation, back to bradycardia, back to fibrillation, and so on?

A. Yes. I am not aware of how many series there were but, yes, that did occur on a number of occasions, two or three occasions certainly, during this arrest.

Q. Is that unusual, in your experience?

A. Yes.

Q. We know from the note that you defibrillated the child a number of times, perhaps as many as six times, and I take it that means you applied electric shock to the exterior of the chest, to stimulate the heart?

A. Yes.

Q. And shock it out of the arrhythmic fibrillation that was going on?

A. That is right, so it starts







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a fresh type of situation.

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Q. Other than those defibrillation attempts by you, were there also spontaneous transfers from fibrillation back to slow rhythm?

6

7

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A. Yes. We were going on continuous rhythm strip on a monitor and it did appear that the child would go spontaneously from a rhythm that looked like ventricular fibrillation back to a relatively normal rhythm.

10

11

Q. Is that spontaneous movement from fibrillation to normal rhythm unusual?

12

13

A. Certainly, in my experience, very unusual, and in my knowledge.

14

15

Q. Was there anything else about this arrest that you regarded as unusual?

16

17

A. There was nothing else at the time, I think, that I regarded as being unusual, apart from what we mentioned.

18

19

20

21

Q. You apparently suspected at the time, and I am looking at line 3 of your arrest note on page 67, the possibility occurred to you at the time that the arrhythmias that you were observing were caused by the elevated potassium?

22

23

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A. Yes.

Q. That, I take it, notwithstanding





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that you had shortly before taken measures to reduce  
the potassium level?

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4

A. That is right. I guess it was  
about three-quarters of an hour or half an hour. It  
is difficult to know, but, yes.

5

6

7

Q. Did you ever at any time get  
any effective pumping response from Baby Pacsai during  
the course of this resuscitation effort?

8

9

10

A. I am just wondering whether I  
comment on that.

11

12

Q. The indication is that C.P.R.  
was effective?

13

A. Yes.

14

Q. I take it at least that there  
was no sustained response in the way of an effective --

15

16

A. I cannot remember.

17

Q. But there were several  
defibrillation efforts?

18

A. Yes.

19

Q. There was an insertion of a  
transthoracic pacemaker at one stage?

20

21

A. Yes.

22

Q. Is it fair to say that with this  
arrest, and I am sure with every arrest, you tried  
everything you possibly could to bring this child back?

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A. Yes. We actually tried to take over the electrical activity and to override the inherent electrical activity and we did get some capture but it did not seem to make any difference.

Q. Eventually after about an hour and 20 minutes you gave up?

A. Yes.

Q. Doctor, without being maudlin about it, that was your second unsuccessful arrest that night. You had had Manojlovich earlier in the night, and now Pacsai. It must have been a pretty dreadful night as far as Dr. Costigan was concerned.

A. Yes.

Q. I take it, though, from the final note - the final line of the arrest note, that following the cessation of that resuscitation effort on Kevin Pacsai you continued to be puzzled about that elevated potassium level. Your note at the bottom raises the question - how did the potassium get from 3.7, the earlier level that had been recorded, to 7.7 in less than 12 hours without any having been given.

Did it occur to you at that time that potassium might in fact have been administered to the child in that 12 hour period? I don't mean that in any sinister way.





1  
2 A. I know what you mean. I am just  
3 trying to know at what point in time that morning or  
4 that afternoon, or at what point during that day, I  
5 extended this question to a possible answer of, you  
6 know, was some given, or whatever. But sometime  
7 during the day I did think that something could have  
8 been given.

9 Q. That possibility did occur to  
10 you, but you are not quite sure just when?

11 A. Yes.

12 Q. Let us look at one other thing.  
13 I take it that an elevated potassium level may be  
14 indicative of some kind of renal problem?

15 A. Yes.

16 Q. Did you investigate that as a  
17 possible explanation?

18 A. Well, from the limited renal func-  
19 tion studies that we had a BUN and things on the  
20 chart, they were normal.

21 Q. And therefore that did not seem  
22 to be a likely explanation for the elevated potassium?

23 A. Yes, that is right.

24 Q. At some point did it occur to  
25 you that the elevated potassium level might be a  
result of the digoxin toxicity that you had suspected?







1  
2 A. My experience and my knowledge  
3 of digoxin toxicity was really with minimal degrees  
4 of digoxin toxicity. I was not aware of severe  
5 digoxin poisoning actually causing high potassium or  
6 very high potassium at that time.

7 Q. Is my understanding correct that  
8 that is in fact one of the consequences or may be one  
9 of the consequences?

10 A. Yes, that is my understanding  
11 of it as well. I am not an expert, but that is my  
12 understanding.

13 Q. Believe me, Doctor, neither am  
14 I.

15 Did it occur to you that, by the  
16 administration of medications designed to lower the  
17 potassium level, the result may in some way have been  
18 to aggravate the digoxin toxicity that may have existed?

19 A. Yes.

20 Q. When did that occur to you?

21 A. Again, it is a little difficult,  
22 sometime during the day, on reflection. It could have  
23 been quite late in the day, really, I am not sure of  
24 the time.

25 Q. Whenever it was that that did  
occur to you, what did you do?

A. My first response was to get the





1  
2 digoxin level or see if it had been taken and of  
3 course it had not been taken, and then I checked  
4 whether there was any serum left from either of the  
5 two samples of electrolytes that I had taken, and  
6 there was none. It had been disposed of. So I then  
7 knew I had taken a CBC sample and my recollection is  
8 not exactly clear, but I think I phoned Dr. Ellis at  
9 this point in time, I am not sure, now, to  
10 know whether it was possible to do a digoxin level on  
11 what is called a sequestrene tube. It is a small tube  
12 that contains an anticoagulant that is suitable for  
13 the measurement of red cells and platelets.

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Q. I am going to take you a little bit by the hand here, Dr. Costigan. Do I understand from what you say that a sample that you draw for complete blood count is put into a different kind of tube or container?

A. That is right.

Q. Than the sample that you draw for digoxin level or electrolyte count?

A. Yes, because it is a serum measurement, whereas the blood count, you don't want the blood clotted. The difference is that serum is what is left after the clotting process takes place.

Q. Let me be sure then that I follow you today. You wanted to know if the digoxin level had, in fact, been done?

A. Yes.

Q. And you found first that the sample for that level had not been drawn. You told us earlier that, in the normal course, it would have been drawn in a routine way at eight or nine o'clock in the morning?

A. Yes. The assays are only done once a day or maybe even every second day, I'm not quite sure.





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Q. So, at eight or nine o'clock in the morning, with this child, nobody was worrying about taking a digoxin sample; they were trying to resuscitate him?

A. Yes.

Q. And, therefore, that sample had not been drawn in the normal way.

You then tried to find out if any of the samples you had drawn for the electrolyte analysis --

A. Yes.

Q. -- remained?

A. Yes.

Q. And you found it had not?

A. Yes.

Q. And then it occurred to you to draw another sample for the complete blood count showing a different kind of vessel?

A. Yes.

Q. And you say you think you called Dr. Ellis to see if that sample in that vessel could be used for digoxin assay?

A. Yes.

Q. And what did he tell you?

A. He didn't know. I mean --







1  
D3 2 he wasn't sure; so, I guess what he knew he could  
3 do was he could probably clot the specimen and  
4 extract the serum. You know, I am not sure what,  
5 technically, he could do, but he probably had some  
6 little scheme in his mind that he could do to  
7 extract some serum.

8 Q. All right. So, we have  
9 Dr. Costigan in search of a sample.

10 Did you, in fact, find some part  
11 of the sample that you had drawn for the complete  
12 blood count?

13 A. Yes.

14 Q. Where did you find that?

15 A. In the Hematology  
16 Department.

17 Q. And you found it in a tube  
18 that, I take it, you could identify?

19 A. Oh, yes. Well, first of  
20 all, with one of the technicians, we went and got  
21 the requisition out and then went through -- they  
22 were relatively filed in an order - I forget how  
23 long they keep them for - but we could just go back  
24 and correlate the number with the requisition, and  
25 I then took the sample down.

Q. And some portion of that





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sample remained?

3

A. Yes.

4

Q. And what did you do with it?

5

A. I took it down to Dr.

6

Ellis' laboratory, which was down the hall.

7

Q. Do you recall what time

8

of day that was?

9

A. My impression was that it

10

was in the evening time, seven o'clock, or approxi-  
mately around that time.

11

Q. I think I can help you,

12

Dr. Costigan.

13

Mr. Commissioner, Exhibit 55 at  
the preliminary inquiry.

14

15

Exhibit 55 at the preliminary  
inquiry, Dr. Costigan, is now what is a copy of a  
clinical chemistry requisition form, and is that  
your signature in the lower right-hand corner?

16

17

18

A. Yes.

19

Q. And the patient is

20

identified at the top right-hand corner as "PASCAI,  
Kevin".

21

THE COMMISSIONER: Is this 32B?

22

MR. LAMEK: Our exhibit number?

23

THE COMMISSIONER: Oh, yes, I'm

24

25





D5 1  
2 sorry. I see it. I beg your pardon. Yes. All  
3 right.

4 MR. LAMEK: Q. "PASCAI", slightly  
5 misspelled, and then "ICU". In the lower left-hand  
6 side, "digoxin level", that is what you wanted done  
7 with this sample?

8 A. Yes. That is what I  
9 requested, the digoxin level.

10 Q. Now, if you would turn  
11 the document upside down, Dr. Costigan, there is a  
12 stamped date and time, just in the centre but above,  
13 half-way up, "81 March 12, 19:44", 7:44 in the  
14 evening?

15 A. Yes.

16 Q. And that was the  
17 requisition that you completed at that time asking  
18 that a digoxin level be measured in this sample  
19 which you had retrieved from the Hematology Department?

20 A. Yes.

21 Q. The remnants of the  
22 sample, or what remained of the sample that you  
23 had drawn shortly after Kevin Pacsai's admission  
24 to the ICU at about 6:00, 6:15, 6:30 that morning?

25 A. Yes.

Q. Thank you.





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When did you hear the results of that assay?

A. I am not one hundred per cent sure on this point. My impression was that it was probably the next day, but I cannot be sure.

Q. Well, if it is of any assistance to you at all, Dr. Costigan, I can tell you - and this, Mr. Commissioner, is Exhibit 45 from the preliminary inquiry.

You can't vouch for the accuracy of this, of course, doctor, and I don't ask you to. I merely give you the date in the hope that it may assist you.

Mr. Commissioner, the page number in the top right-hand corner is 23, and the date at the top of the page on the right-hand side is 12 March 1981. About half-way down the right-hand side, 13 March 1981, Items 4 and 5 appear to be "PASCAI", again spelled that way, "Kevin, to ICU". There is a sample number which, in fact, coincides with that on the requisition, Mr. Commissioner. I ask you to accept that from me. A notation again on the left-hand side that it was multiplied by 2, suggesting dilution, "NSQ for further DIO, not enough to dilute further" and a level greater than 10.







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That appears to have been done  
on March 13th, the day following the evening upon  
which you delivered the sample to Dr. Ellis' lab.

Is that of any assistance to you  
at all in remembering when you heard from Dr. Ellis  
about that level?

A. I still can't be sure, no.

Q. You think it was the  
next day, though?

A. Yes.

Q. Which would be consistent  
with his having done the assay that day?

A. I am not sure what time  
he did the assay. You know, it could have been done  
in the afternoon; I am not sure really.

Q. You told us that Ellis  
had not known, had not known whether he could do a  
proper digoxin assay --

A. Yes.

Q. -- on a sample in a CBC  
tube?

A. Yes.

Q. And we mean no disrespect  
to the media, let me be clear!

THE COMMISSIONER: What does "CBC"





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stand for?

3

MR. LAMEK: Complete blood count.

4

Q. And, therefore, I take

5

it you could not have absolute confidence that the  
level that is apparently thrown up by the analysis  
of greater than 10 was what you called earlier a  
"true bill"?

6

7

8

A. Yes.

9

Q. Was that a matter that

10

you discussed with Dr. Ellis?

11

A. Yes.

12

Q. After he had done his

assay?

13

A. Yes.

14

Q. And did you arrive at

15

any expedient for resolving the question as to  
whether that was a reliable assay result?

16

17

A. Well, I offered to get him

18

another sample in the same tube to see whether - from

19

a patient who was on digoxin. That is my recol-

20

lection, and he would be able to see whether it was

21

roughly equivalent to the true bill, whatever, you

know.

22

Q. You offered to get a

23

sample from another patient also on digoxin, in what,

24

25





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the same tube, or a similar tube, the CBC tube?

3

A. Yes.

4

Q. To see if the tube had

5

any effect upon that sample?

6

A. Yes.

7

Q. And did you do that?

8

A. Yes. I can't remember

9

the manner in which I did it. I really don't

10

remember. I didn't actually take any blood from

11

the patient. I think I went to the ward, and I

12

can't remember, found a patient who was on digoxin

13

and had a CBC done that morning and, you know, that  
was the mechanism for it.

14

Q. So, you used some of the

CBC sample?

15

A. Yes.

16

Q. Just as you had with

17

Pacsai?

18

A. Yes.

19

Q. And was that sample

20

delivered to Dr. Ellis for assay?

21

A. Yes.

22

Q. Did he subsequently

report the results of that assay to you?

23

A. Yes.

24

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Q. What did he tell you?

3

A. Well, his report was that

4

he -- it seemed that he could measure digoxin in a  
CBC tube, that that sort of corroborated the fact.

5

What he said, as far as I recollect, was that he

6

had measured a second sample and found that the

7

measure was relatively -- was within normal limits,

8

or whatever; so, therefore, he was happy he could

9

measure in the CBC tube from that.

10

Q. He appeared to conclude

11

that the tube didn't have the effect of elevating

12

the level?

13

A. Yes.

14

Q. Do you recall when you

got that information from Dr. Ellis?

15

A. Yes. My impression was

16

that was Tuesday, because he also told me, at that

17

same time on the same telephone conversation, that

18

he had also received a sample from the same child,

19

Pacsai, from post mortem sample, and that was also

20

elevated.

21

Q. Was that the first time

that you had been aware that a post mortem sample

22

had been drawn from Pacsai for digoxin assay?

23

A. Yes.

24

25







D11

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Q. Did you ask him who had  
ordered that sample drawn?

3

4

A. No. He told me it had  
come from the Pathology Department. I don't know  
whether he mentioned a name or not.

5

6

7

Q. You think that was on  
the Tuesday. Did he tell you the level that had  
been recorded in that post mortem sample?

8

9

10

11

12

A. I don't know whether he  
gave me a figure, but I know he told me it was very  
high, or he told me a figure that I interpreted as  
being very high.

13

14

15

16

17

18

Q. Well, you now know that  
the level was 26. So, I take it that, as of  
Tuesday, you had two pieces of information; one,  
that the level of greater than 10 recorded in the  
sample which you had produced appeared to be a  
reliable one because the tube didn't appear to  
distort the results?

19

A. Yes.

20

21

22

Q. And, two, that there was  
an elevated level, which you may have known to be  
26 in the post mortem sample, which had also been  
submitted from Pacsai?

23

A. Yes.

24

25





D12

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Q. And upon receiving

3

those two items of information, what was your

4

reaction, what was your response?

5

A. Well, then I felt we had

6

a digoxin level, whereas, up to that, I was con-

7

cerned that we were dealing with artefacts.

8

Q. All right.

9

A. So, I then went and

10

reported it, found out, I guess, who was the

11

physician responsible for the patients that month

12

on the Cardiology floor, and went and spoke to

13

Dr. Fowler in his office.

14

Q. You reported the informa-

15

tion that you had received to Dr. Fowler?

16

A. Yes.

17

Q. On the Tuesday?

18

A. Yes.

19

Q. Were you concerned by the

20

high readings of which you were now aware and upon

21

which you thought you could rely?

22

A. Yes, I was concerned. Yes.

23

Q. Did you have any opinion

24

as to whether those readings might indicate that

25

digoxin toxicity was indeed an element in the death

of Kevin Pacsai?





Costigan  
dr.ex. (Lamek)

D13

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A. Yes, I had. I guess

I had a little picture now in my mind of the possible dynamics of what happened, not being an expert, but my impression was that we may have aggravated the situation if it was digoxin toxicity and we may have aggravated the situation by reducing the potassium.

Q. You were obviously concerned about the role that you may unwittingly have played in the act?

A. Yes.

Q. Do I understand you to be saying that, upon receiving the information as to the levels - first, did you regard those levels as corroborating each other?

A. The ante mortem and the post mortem?

Q. Yes.

A. Yes.

Q. And with that information, was it your judgment that the cause, the probable cause of the child's death, had been digoxin intoxication?

A. It certainly, yes, was a strong possibility at that time. Yes.





D14

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Q. Had you ever come into  
contact with a level of 25, 26 nanograms before?

3

4

A. No, no.

5

6

Q. Did you have some awareness  
of what the generally accepted toxic range for  
digoxin was?

7

8

A. Yes. Of course, I had  
never seen anything that high.

9

10

Q. This was very substantial-  
ly above the normally accepted toxic range?

11

A. Yes.

12

13

Q. Were you concerned,  
therefore, that this might represent a lethal level?

14

15

16

A. I wasn't aware of what  
the lethal level of digoxin was. My only knowledge  
was it was a lot higher than previous levels I had  
seen associated with toxicity.

17

18

19

20

Q. When you spoke to Dr.  
Fowler on the Tuesday, did you discuss with him  
whether the levels which had been reported to you  
might represent lethal concentrations of digoxin?

21

22

A. I didn't know about  
lethal concentrations; I didn't know what a lethal  
concentration was.

23

24

25

Q. Did you ask him?







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A. I don't remember asking him that particular question.

Q. What was Dr. Fowler's response to the information about the Pacsai levels?

A. It is difficult to remember words that he said, or whatever.

Q. Did he appear to be concerned?

A. Yes, he was concerned. Yes.

Q. Did he -- did the two of you discuss how the levels could possibly have occurred?

A. The discussion was not very extensive. We just talked briefly about the medication -- he mentioned about medication errors. He gave me the impression that there was a problem or that he had some prior knowledge of a problem and that he was going to see about it straight away, and he actually left the office at that time with me to go to the ward.

Q. I recognize the difficulty of recalling what was said --

A. Yes.

Q. -- a distance of two





1  
D16 2 and-a-half years. When you said he gave you the  
3 impression of awareness of a problem, you mean  
4 awareness of a problem generally about medication  
5 errors, or a problem about digoxin in particular?

6 A. My impression was it  
7 was probably medication errors.

8 Q. And I take it medication  
9 errors are not unknown in hospitals?

10 A. No, of course they are not.

11 Q. How long did your dis-  
12 cussion with Dr. Fowler last, doctor, on the Tuesday?

13 A. Again, it is difficult  
14 to be precise, but it wasn't very long.

15 Q. And, at the end of that  
16 discussion, was it your understanding that Dr. Fowler  
17 was going to look into the matter in some way?

18 A. Well, yes. I thought  
19 that is what he was -- like, he left his office.  
20 I interrupted him in his office, and he got up and  
21 left to go.

22 Q. Did you expect that, at  
23 some point, you would hear back as to what he had  
24 been able to find out?

25 A. Yes. I presumed I would,  
yes.





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Q. Now, we know from previous evidence that, on the following morning, Wednesday, March 18th, you gave the same information to Dr. Carver, the Chief of Pediatrics.

A. Yes.

Q. And we have heard from Dr. Carver that, following grand rounds that morning, you said you wanted to speak to him.

A. Yes.

Q. Is that consistent with your recollection?

A. Yes.

Q. I take it your purpose in wanting to speak to him was to raise this very matter?

A. Yes.

Q. What prompted you to go to Dr. Carver with the information on the Wednesday morning?

A. I am not quite sure. Maybe it was reflecting over the night; maybe I had heard nothing further. I am not quite sure what precipitated me to go and speak to him. My recollection was that it was quite late on Tuesday when I spoke to Dr. Fowler and it was nine o'clock, ten





D18

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o'clock on the Wednesday when I spoke to Dr. Carver.

3

Q. You had heard nothing

4

from Dr. Fowler in the meantime?

5

A. No. I heard nothing in  
the Hospital or from the associates who were on the  
night before, or anything.

6

7

Q. Where did your discussion  
with Dr. Carver take place? In his office?

8

9

A. Yes, in his office.

10

Q. And you reported to him

11

the Pacsai levels. I take it you gave him some  
background information of the child and your involve-  
ment?

12

13

A. Yes, I probably gave him  
the whole story.

14

15

Q. And what was his response  
to the information?

16

17

A. Well, his response was that,  
you know -- he put in a call for Dr. Fowler and a  
call for Dr. Rowe, and I forget who else he was  
going to contact.

18

19

20

Q. Were you present when he  
spoke to either of those gentlemen?

21

22

A. No, I don't think so. No.

23

I cannot remember.

24

25







D19 1  
2 Q. Did Dr. Carver appear to  
3 be concerned by the information that you had taken  
4 to him?

5 A. Absolutely, yes.

6 Q. And where was the matter  
7 left between you and Dr. Carver?  
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A. Well, Dr. Carver was taking over the situation, you know, and the way it was was that he was waiting to hear from Dr. Rowe. I'm not quite sure whether he had actually spoken to Dr. Fowler on the telephone or not and arranged a meeting later. I think this was what had happened before I left.

Q. Okay. In the course of your discussion with Dr. Carver did the two of you talk about any possible explanation for the Pacsai digoxin levels that you had reported, how could they have occurred?

A. I can't remember that discussion if it did take place.

Q. Okay. Now, did you at some point in time, Doctor, and let's focus first on the period up to March 18 when you reported the Pacsai information to Dr. Carver, prior to that time had you become aware that a baby who had died on the cardiology ward back in January, a baby called Janice Estrella had had a digoxin level of 72 nanograms per millilitre recorded in a postmortem sample taken from her? Were you aware of that?

A. No.

Q. All right. Did you subsequently





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become aware of that?

3

A. Yes.

4

Q. Without going into the circumstances just now, when did you learn of the Estrella death and level?

5

6

A. Saturday morning. I can't remember the date but it would have been the next Saturday after that Wednesday.

7

8

Q. Okay. We will come to that in a moment. That would be Saturday the 21st.

9

10

A. Okay.

11

12

Q. Yes. At any time after the morning of March 18th, 1981, Dr. Costigan, at any time after that morning, did Dr. Rowe have any discussion with you that you can recall about the Pacsai case?

13

14

15

16

A. I can't remember, you know, any formal discussion.

17

18

Q. Any discussion at all?

19

A. No, I can't remember.

20

Q. What about Dr. Fowler, did he have any discussion with you that you can now recall?

21

22

A. No.

23

Q. Or any other staff cardiologist?

24

A. No.

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Q. All right. Do you recall having had any discussion with Dr. Bain about the Pacsai case and, in particular, I would ask you to think about the summer of 1982 when, as we know, Dr. Bain was reviewing all of these cases including that one. Do you recall any discussion with Dr. Bain at that time?

A. No.

Q. Were you surprised when Kevin Pacsai arrested and died on the morning of March 12th?

A. I was surprised when he arrested, yes.

Q. Did you regard his death as unexpected?

A. Yes.

Q. In your professional judgment, Dr. Costigan, following that child's admission to the ICU after the immediate settling down period, what was his clinical status? Was it precarious, unstable, stable, how would you describe it for us?

A. Well, my impression at the time was that he was stable over a period of, what, two hours or whatever, an hour and a half.

Q. And that was your impression notwithstanding that you had had him transferred to







1  
2 the ICU in the first place, that he had had these  
3 periods of arrhythmias and the apneic spells?

4 A. Yes, he had been stable and  
5 we gave him some atropine and he seemed to be more  
6 stable with the faster heart rate and, you know, over  
7 that brief period of time he was even stable.

8 Q. All right. Now, at page 94  
9 of the Pacsai chart, Dr. Costigan, there is the  
10 preliminary autopsy report. I recognize that this  
11 was probably not available - well, I should ask you.  
12 The autopsy on the child was performed March 13th.  
13 I'm afraid I don't know exactly when the preliminary  
14 report was prepared. Had you seen the preliminary  
15 report at the time you spoke to Dr. Carver on March  
16 18th?

17 A. No.

18 Q. Okay. Do you recall ever  
19 having seen the autopsy report on this child?

20 A. Just subsequent in the police  
21 investigation or whenever I was reviewing the chart  
22 and I saw it, yes.

23 Q. But after the events of March  
24 18, 19, 20, 21?

25 A. No.

Q. After that is when you saw that?





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A. Yes, I'm sorry, yes.

3

Q. The preliminary autopsy report

4

which was signed by Dr. Cutz identifies as the

5

immediate cause of death the last sentence under

6

Short History Final Note, the immediate cause of

7

death is digitalis toxicity, postmortem blood level

8

detected was 26 nanograms, that should be, per

9

millilitre. At the end of March, 1981, Dr. Costigan,

10

was that a conclusion with which you would have

11

agreed?

12

A. Yes.

13

Q. And in light of the digoxin

14

level information, of which you have told us, in

15

light of what you observed before and during the

16

resuscitation effort on Kevin Pacsai and in light

17

of what you know or knew about the clinical and

18

anatomical condition of the child, is it still your

19

view that digitalis intoxication was the probable

20

cause of his death?

21

A. Yes.

22

Q. Now, can we move forward, move

23

on to an event later on in that week. We know that

24

in the early hours of Saturday morning, March the

25

21st, a baby called Allana Miller died on Ward 4A.

26

I don't believe, Doctor, that you had anything to do

27

28





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with the care and management of that child, am I  
right?

4

A. Yes.

5

6

Q. A Code 25 was called. Were  
you involved in the unsuccessful resuscitation  
attempt on that child?

7

8

A. No.

9

Q. All right. When did you learn  
of her death?

10

11

A. It was approximately maybe  
7:30 on that Saturday morning the 21st.

12

Q. Were you on duty that day?

13

A. No, no.

14

Q. Were you at the Hospital when  
you found out about Allana Miller's death?

15

16

A. Yes. I had just dropped in  
my wife. She was working that day, she's a nurse in  
the Hospital.

17

18

19

Q. Your wife is a nurse at the  
Hospital?

20

A. Yes.

21

Q. Working the day shift that day?

22

A. Yes.

23

Q. So, you had driven her to the  
Hospital?

24

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A. And I had gone up to do some  
work myself.

4

5

Q. All right. You had arrived  
then, what, about 7:00 in the morning?

6

7

A. Yes. She had to start at  
7:30, so, it was about 7:00, 7:15.

8

9

Q. All right. And was it shortly  
after your arrival that you learned of the death of  
Allana Miller?

10

11

A. Yes, I phoned Dr. Canny.

12

Q. Who is he, please?

13

A. Sorry, Dr. Canny is the  
associate chief resident who was on call that night.

14

Q. Yes. The preceding night.

15

A. Yes, the preceding night.

16

Q. And was it from him that  
you learned of the death of Baby Miller?

17

A. Yes.

18

19

Q. What did he tell you, to the  
best of your recollection?

20

21

22

23

24

25

A. Again, I can't remember words  
or whatever, but he described, he said that he had  
had an arrest and he told me it was unsuccessful  
I guess and then he may have described some parts of  
the arrest, I cannot remember really, the actual







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things he told me about the arrest.

3

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Q. If you were to look at the arrest note in that case, would it perhaps prod your memory?

6

7

A. I don't know really. I can if you like.

8

9

Q. Well, it may not greatly matter.

10

11

12

13

Q. Was there anything about the information that you received that caused you any concern, even though you may not be able to identify it now? Were you concerned in any way on hearing of the story of the Allana Miller case?

14

15

A. Yes, I was concerned. For what reason I'm not sure, but I was concerned.

16

17

Q. About what were you concerned? I mean, what was the nature of your concern?

18

19

20

21

22

A. The concern I guess, I actually asked him had he performed a digoxin level. I think that is the question I asked him, or whatever. He had said no and, so, at that point I went to the post mortem, to the autopsy or to the Pathology Department.

23

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Q. Okay. Well, let's just pause there. Something that Dr. Canny said and you cannot





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not recall what caused you to ask the question, did you order a digoxin level or did you take a digoxin sample?

A. Yes. That is my recollection that I did ask him that question.

Q. Was the nature of your concern, you must feel free to say very squarely no if this is wrong, was the nature of your concern that digoxin may in some way have been involved in the Miller death?

A. I don't know whether I actually took it that far or not but it was obviously on my mind, yes.

Q. And at that time you would still not have heard about the Estrella case?

A. No.

Q. All right. You were operating solely on the information that you had about Pacsai?

A. Yes.

Q. And Dr. Canny told you that, no, he had not ordered a digoxin level on the child.

A. Yes, that is my recollection.

Q. And I think I broke in just as you said you went down to the Pathology Department.

A. Yes.





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Q. For what purpose did you go there?

A. Well, to see if we could get a sample, a postmortem sample for digoxin.

Q. All right. And whom did you see?

A. A resident in pathology whom I later found out was Glenn Taylor.

Q. Glenn Taylor?

A. Glenn Taylor.

Q. And did you understand that it was Dr. Taylor who was to do the autopsy?

A. Yes, I think I probably asked him.

Q. On the child?

A. I mentioned the autopsy and he said yes, I was responsible or I'm doing it or something like that.

Q. Do you recall what time of day you went down to the Pathology Department, approximately?

A. Well, my recollection was that it was in the morning, 9 o'clock or 10 o'clock or something like that.

Q. All right. I can tell you,





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Doctor, and ask you to accept it from me that the autopsy report on Allana Miller records that the autopsy was conducted some six hours after death and she died about 3:30 in the morning. So, if the autopsy began at 9:30, do you recall whether you spoke to Dr. Taylor before he had begun the autopsy?

A. That point I cannot be sure of.

Q. All right. Did you ask Dr. Taylor to draw a sample of blood at autopsy for digoxin assay?

A. Yes.

Q. All right. And did he agree to do that?

A. Yes.

Q. All right. Did you have any discussion with him as to the site from which the sample should be drawn?

A. I cannot remember. I think I may have approached him about the possibility of taking a postmortem sample or whatever. I'm not sure how I approached the question of would he he do a digoxin level. All I remember is we did talk about using the aqueous humor of the eye to measure potassium levels. So, there was obviously some discussion that went on about the site.







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Q. But you can't now recall the details?

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A. No.

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Q. Prior to having that discussion with Dr. Taylor about taking a sample for digoxin assay had you had any discussion with anybody about making that request?

9

A. No.

10

Q. Did you seek anyone's approval to request the postmortem level?

11

A. No.

12

13

Q. Or tell anyone that that is what you intended to do?

14

A. No.

15

16

17

Q. All right. Did you subsequently learn that Dr. Cutz also instructed Dr. Taylor to obtain a blood sample at autopsy for a digoxin level?

18

A. Yes. Well, subsequently, I think it was a long time later.

19

20

Q. All right. When did you expect to get the results of the digoxin assay?

21

22

A. I would have expected for it to be put on the run on Monday.

23

Q. All right.

24

A. Whenever the next run was.

25





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Q. They are not normally done over  
the weekend I take it?

4

A. No.

5

Q. And this was a Saturday morning?

6

A. Yes.

7

Q. Now, you have told us earlier  
that it was on Saturday that you learned about the  
Estrella case?

8

9

A. Yes.

10

Q. How and in what circumstances  
and from whom did you learn about Estrella?

11

12

A. I was relating I guess in a  
brief form my experience on the previous Thursday  
when I was asking Dr. Taylor to do the digoxin level  
and he said, oh, we had one, a digoxin level of  
something like very high or 70 or something back in  
January and we couldn't make anything of it or  
something like that.

13

14

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Q. Yes.

19

A. And that was how I discovered  
about the Estrella baby.

20

21

THE COMMISSIONER: Just a moment please.  
---Discussion off the record.

22

23

MR. LAMEK: Q. You have told us  
that Dr. Taylor mentioned to you the Estrella matter

24

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and the high number, 70s or something but they  
couldn't make anything of it.

3

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A. Yes.

5

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Q. Did you at that time ask him  
for further information about the Estrella case?

7

8

A. My impression was that he was  
giving me as much as he knew about the Estrella case.

9

10

Q. Did you at any time on that  
Saturday seek from anyone else or any other source  
information about the Estrella case?

11

12

13

14

A. Well, I was concerned about  
the possibility that there was two people with high  
digoxin levels to my mind, so, I sought out  
Professor Carver and explained the situation to him.

15

16

Q. All right. Was that on  
Saturday morning or Saturday afternoon?

17

A. My recollection was Saturday  
afternoon.

18

19

20

21

22

23

Q. Now, we know from other evidence,  
Dr. Costigan, that on the afternoon of Saturday,  
March 21st, Dr. Carver was at a meeting at the  
coroner's office, a meeting that had been called to  
discussed the Pacsai and Estrella cases. Were you  
aware that such a meeting had been called?

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A. No.





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Q. All right. If you saw him in the afternoon - early or late afternoon, do you remember?

A. I can't remember exactly.

Q. All right. You saw him in his office?

A. Yes.

Q. Was that for the expressed purpose of telling him that you had now learned of another child with a high digoxin level?

A. Yes.

Q. Who had died in January?

A. Yes.

Q. I take it that Dr. Carver already knew about the Estrella child?

A. Yes. Well, my purpose was to get the digoxin assay done on Saturday, that day.

Q. On Miller?

A. Yes.

Q. All right. You didn't want to wait until Monday in the ordinary course?

A. Yes.

Q. Did Dr. Carver agree that it was a matter of some importance and urgency to







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2

get the Miller level as quickly as possible?

3

A. Yes.

4

Q. And did he take steps to

5

expedite that?

6

A. Yes, he phoned the staff from

7

clinical chemistry, Dr. Soldin I think it was.

8

Q. Yes.

9

A. Who agreed to come in and do

the assay.

10

Q. All right. We know that the

11

Miller digoxin level was reported back at about

12

8 o'clock that evening?

13

A. Yes.

14

Q. Did you remain at the Hospital

15

from the time of your discussion with Dr. Carver

16

until the time the level was reported on Miller?

17

A. Yes, I think so, yes.

18

Q. Did you have any further

19

discussion with Carver prior to the reporting of

20

the Miller level other than as you have summarized  
for us?

21

A. No, I don't think so.

22

Q. Okay. Did Dr. Carver tell you

23

any more about the Estrella case than you already

24

knew?

25





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A. Well, he just told me that he had been at the meeting with the Coroner, or whatever, about the patient in January, but he didn't elaborate on the circumstances of the death in January.

Q. All right. Do you recall whether Dr. Carver said anything to you about the reliability or the unreliability of the levels recorded in the Estrella samples at that time?

A. I can't remember him saying anything like that.

MR. LAMEK: Mr. Commissioner, I am just about to come to the reporting of the Miller levels and the brue ha ha that followed that. Is this a sensible time to take a break?

THE COMMISSIONER: All right, we will take 20 minutes.

---Short recess.

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/DP/ak

---Upon resuming.

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THE COMMISSIONER: Yes, Mr. Lamek.

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MR. LAMEK: Thank you, sir.

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Q. Dr. Costigan, we have reached the point in the events of Saturday when Dr. Carver had expedited the performance of the radioimmunoassay on the sample from Miller.

9

10

11

A. Yes.  
Q. And you told me, I think, just before we broke, that you remained at the Hospital until those results came back?

12

13

14

15

A. Yes.  
Q. We know from other evidence that was about 8 o'clock. Is that consistent with your recollection?

16

17

A. Yes.  
Q. Did you stay with Dr. Carver throughout that period?

18

19

20

A. No, I do not remember what I did in that period but I don't remember being with Dr. Carver all the time.

21

22

23

Q. We will come to one thing later that you did in that period, but otherwise you don't recall being with Dr. Carver?

24

25

A. No.





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Q. Do you recall to whom the  
Miller digoxin level was reported? Was it to you?

A. No, I think it was to Dr. Carver.

Q. How did you learn of the level?

A. My recollection is that  
Dr. Carver called another meeting and there was the  
nursing supervisor and myself and Dr. Fowler, I think,  
and maybe other people there at that meeting in his  
office.

Q. Was it at that time that  
Dr. Carver relayed to the meeting the information  
that the Miller level had been reported at 78 nano-  
grams per millilitre?

A. Yes, or he may have even told  
me on the phone when he was gathering the meeting.

Q. As at the time you went to the  
meeting on Saturday evening in Dr. Carver's office,  
or shortly after your arrival there, you now knew  
of three children with elevated digoxin levels that  
had been reported: one, you knew of Estrella, the  
child who died in January?

A. Yes.

Q. Two, you knew of Pacsai who  
died on March 12th and, now, three, you knew of  
Miller?







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A. Yes.

3

Q. And in your own mind, first,

4

without getting into the discussion, what was your  
5 reaction to this third child in whom this very high  
6 digoxin level had been reported, added to the two  
7 of which you were previously aware?

8

A. I had many sort of responses.

9

I did not really know and I was wondering about many  
possibilities of medication errors or whatever.

10

That was really my thinking at the time.

11

Q. Had the possibility of

12

intentional administration of toxic dose to those  
13 three children occurred to you?

14

A. I am not quite sure in the

15

time sequence when it did occur to me, but it did  
occur, yes.

16

Q. In the course of Saturday

17

evening, did it occur to you?

18

A. Yes.

19

Q. In considering that possibility,

20

which was obviously a very distasteful one, did you  
21 seek around in your own mind for any other possible  
22 innocent, that is, not intentional, explanation for  
23 the three deaths?

23

A. Of course, yes.

24

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Q. Were you able to find any plausible innocent explanation that satisfied you as a possible explanation for those three deaths?

A. I only had first hand knowledge really of one case. The others were just sort of - I was not directly involved with.

Q. But the other two had very much higher levels reported than the one in which you yourself had been involved in?

A. Yes.

Q. Did you have any reason at that time to doubt the validity and reliability of those readings, in Estrella and Miller?

A. I was aware that the other two readings were postmortem readings and mine was an antemortem reading but I was not aware at the time of the difficulties of comparing one with the other.

Q. Is it not fair to say that in the case of Pacsai at least you told me that you regarded the ante mortem of greater than 10 and the post mortem of 26 as being corroborative of each other?

A. Yes, compatible.

Q. Can I go back to my question





1  
2 then. During the course of Saturday evening, as you  
3 turned this troubling situation over in your mind,  
4 Dr. Costigan, did any innocent and plausible explana-  
5 tion occur to you as to the cause of those children's  
6 deaths?

7 A. Lots of possibilities came,  
8 like medication errors or that sort of thing, but  
9 there were the two principal candidates. One was  
10 medication error on a repetitive basis, and the  
11 other was foul play.

12 Q. We know that one of the things  
13 that came out of the meeting with Dr. Carver and  
14 Dr. Fowler and the nursing supervisor that night  
15 was a decision to treat digoxin as a controlled drug?

16 A. Yes.

17 Q. Was there discussion at the  
18 meeting of the possibility that these three deaths  
19 might have been caused by intentional administration  
20 of toxic doses?

21 A. Yes.

22 Q. Was it that consideration that  
23 led, as I would take it, to the decision to lock up  
24 the digoxin?

25 A. Yes.

Q. If that is what was happening,





1  
2 let us at least try to guard against a recurrence.  
3 Was that the thinking?

4 A. Exactly.

5 Q. We will come to what you and  
6 Dr. Mounstephen did to implement that decision in  
7 a moment.

8 Do you recall anything else that was  
9 discussed at the meeting on Saturday evening at  
10 which you and Dr. Fowler and Dr. Carver and a nursing  
supervisor were present?

11 A. Yes. We discussed the  
12 possibility that one team of nurses might be common  
13 to the three episodes.

14 Q. Do you recall who raised that  
15 as a possibility?

16 A. I am not 100 per cent sure.  
17 It may have been myself, actually, I am not 100 per  
cent sure, though.

18 Q. Had you, prior to that meeting,  
19 made any observation that a particular nursing team  
20 appeared to be associated with or present on<sup>the</sup> occasion  
21 of a number of deaths on the cardiology wards?

22 A. Yes. The observation was  
23 made known to me on one occasion when a group of  
24 that particular team of nurses were very upset one  
25







1  
2 night after a cardiac arrest and there were tears  
3 and things like that. I'm not quite sure at what  
4 time or when this was, but my impression was that they  
5 had had two or three arrests during their particular  
6 stint at that time and they were upset.

7 Q. But on the Saturday evening,  
8 March 21, there was discussion, as I understand you,  
9 of the possibility that one nursing team may have  
10 been present for each of these three deaths that  
11 were causing so much concern.

12 A. We did not have our information  
13 about January but I think we had information about  
14 Pacsai and about Miller.

15 Q. It appeared there that the  
16 same nursing team had been on duty for each of those  
17 deaths.

18 A. That is my recollection of  
19 what went on in our thought processes.

20 Q. Did that discussion occur in  
21 the context of the possibility of intentional over-  
22 dose or medication error, or both?

23 Q. My recollection is that it was  
24 both.

25 Q. Do you recall anything else  
that was discussed at that Saturday evening meeting?





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A. No, I cannot remember anything  
else at the moment.

4

5

6

Q. I understand then that  
Dr. Mounstephen, he had not been at the meeting, had  
he?

7

8

9

A. No, I think Dr. Mounstephen  
was looking after other things in the house at the  
time.

10

11

Q. He was minding the store while  
you were at the meeting?

12

13

14

A. Yes.

15

16

17

Q. He was summoned, was he, to  
assist you in implementing the decision to have  
digoxin treated as a controlled drug?

18

19

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21

22

A. Yes.

Q. And you and he went to every  
ward in the Hospital with those new instructions  
about digoxin?

23

24

25

Q. We have heard from Dr. Carver  
earlier that you and Dr. Mounstephen prepared an  
inventory of the digoxin you found on the various  
floors of the Hospital.

A. Yes.

Q. I am showing to you what I





1  
2 think to be a copy of that inventory, Dr. Costigan.  
3 Do you recognize it as such?

4 A. Yes.

5 Q. I know you had the original  
6 in your care and I am content that you keep it  
7 there. May that be the next exhibit, Mr. Commissioner?

8 THE COMMISSIONER: Exhibit 205.

9 ---EXHIBIT NO. 205: Inventory of Digoxin at  
10 The Hospital for Sick Children.

11 THE COMMISSIONER: There is no need  
12 to do it, but you have a curriculum vitae, do you,  
13 of Dr. Costigan?

14 MR. LAMEK: I am having copies made.  
15 I can file it on re-examination.

16 THE COMMISSIONER: Yes, all right.

17 MR. LAMEK: Q. Before we get to the  
18 actual inventory, Doctor, just give me an idea,  
19 and we need not take very long with this, did you  
20 and Dr. Mounstephen travel together through the  
21 Hospital or did you divide the place up between you?  
22 How, physically, did you do this thing?

23 A. My recollection was that we  
24 started on the 9th floor and then we came to the 8th  
25 floor and then we would go to one ward and we would  
meet back at the centre elevator bank. If I was





1  
2  
3 back first I would go up to his ward and if he was  
4 back first he would come up to mine, or whatever.

5 Q. And your purpose, as I under-  
6 stand it, was threefold.

7 First, to inform the nurse in charge  
8 of each ward of the new rules relating to the storage  
9 and administration of digoxin?

10 A. Yes.

11 Q. Second, to check whether there  
12 was digoxin, parenteral digoxin preparation on the  
13 crash carts on the various floors?

14 A. Yes.

15 Q. And, third, to compile an  
16 inventory of the digoxin that was in the various  
17 wards?

18 A. That is correct, yes.

19 Q. Now, in the inventory that  
20 you prepared, it is perfectly clear that in many  
21 cases you found no digoxin at all either on the floor  
22 or on the cart?

23 A. Yes, on 1, 2, 3, 4, 5, 6, 7  
24 wards.

25 Q. Yes, and I take it that the  
inventory discloses that on Ward 4B, and 4A, although  
the parenteral digoxin preparations were found in







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the medications room no digoxin was found on the crash  
carts on that floor?

4

A. Correct.

5

6

Q. Or on those wards, I am sorry,  
but on 4C there was some on the crash cart?

7

A. Yes.

8

9

Q. But 4A and B, the cardiology  
wards, you found no digoxin on the crash carts?

10

A. That is correct.

11

Q. Who carried the news to Wards  
4A and 4B?

12

A. I did, as far as I recollect.

13

14

Q. Was Dr. Mounstephen with you,  
do you recall, when you went to 4A?

15

A. It is difficult to remember.  
I am not 100 per cent sure.

16

17

Q. To whom did you convey the  
information about the new digoxin rules on Ward 4A?

18

19

A. As I did in the other wards,  
it was to the team leader on duty at the time.

20

21

Q. Do you know who that was?  
Do you know her name?

22

23

24

25

A. I did not know her name at the  
time. I think I know now. I think it was Phyllis  
Trayner, I'm not sure of it.





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Q. How did you know she was the  
team leader?

4

5

A. They wear the keys of the locked  
cupboard around their neck, usually on blue band.

6

Q. A little like a chain of office?

7

A. That is right.

8

9

Q. Where was Nurse Trayner, or the  
team leader, I am sorry, where was she when you  
arrived on the floor?

10

11

12

13

A. She was in the room immediately  
to the left of the nursing station as we approached  
the nursing station from the centre bank of elevators.  
I think it is 418.

14

15

Q. 418, that is the room with  
the large number of infant beds in it?

16

17

A. Yes, there is a comparative  
one on the other side.

18

19

Q. Was any other nurse in the  
room with her?

20

21

22

A. Yes, Nurse Nelles was in the  
room.  
Q. Did Nurse Nelles have a  
patient in that room?

23

24

25

A. Yes.

Q. Do you know who the patient  
was?





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A. My impression was that it was  
Baby Cook, a patient who subsequently died.

4

5

Q. We will come back to him in a  
little while, then.

6

7

Did either Nurse Nelles or the team  
leader make any comment when you announced the new  
rules about digoxin?

8

9

A. I don't remember any comment.

10

11

Q. Did either of them show any  
response of any kind to the announcement - surprise,  
relief, dismay, anything at all?

12

13

A. I don't remember any expression  
of emotion or anything.

14

15

Q. Did you stay to see the digoxin  
locked up on that floor?

16

17

18

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A. Yes. My recollection is that  
I went with the team leader and we took the medications  
from their usual place in the medicine room and she  
put them into the locked cabinet. I cannot remember  
seeing the door actually closed but I was present  
when she had the keys and the door was opened so my  
understanding was that she had done that.

22

23

24

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Q. Did you visit Wards 4A and 4B  
in their natural order as you worked your way down  
from that floor or did you give them any priority?





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3 A. I think we anticipated that it  
4 would not very long and we did not want to really  
5 create any sort of alarm. It was a general rule so  
6 we just started at the top and worked our way down.

7 Q. Having worked your day through  
8 the whole Hosiptal in that way, I take it you then  
9 reported to Dr. Carver that his instructions had  
10 been relayed and carried out?

11 A. Yes.

12 Q. Did you then go home,  
13 Dr. Costigan?

14 A. Yes.

15 Q. At approximately what time?

16 A. I think it about 12:30 or  
17 1 o'clock.

18 Q. Having finally got you home  
19 in the early hours of the 22nd, let me take you back  
20 to the early evening of the 21st.

21 In the period between your meeting  
22 with Dr. Carver when he expedited the Miller level  
23 assay and your subsequent meeting with him and Fowler  
24 when the implications of that level were discussed,  
25 did you have any occasion to be on the cardiology  
wards?

A. Yes, I was on the cardiology







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2

wards at one point in time.

3

Q. Do you recall for what purpose?

4

A. No, I cannot really recall  
why I was on the ward at that time.

5

6

Q. Do you recall anything that  
happened while you were on the cardiology ward?  
About what time would that be?

7

8

A. Some time about 6 o'clock. I'm  
not 100 per cent sure but you could check it really  
because Baby Cook was having a blue spell when I  
arrived, just as I - they were treating him.

10

11

12

Q. I think the Cook chart does  
indeed reveal that he was having a blue spell about  
6 o'clock.

13

14

Were you involved in any way in that  
episode?

15

16

A. No, I was just watching how  
it was done, really. The cardiology Fellow,  
Dr. Jedeikin, and one of the cardiology residents  
on the floor at the time, I'm not sure who it was,  
really, were administering some propranolol, I think,  
and the child seemed to recover while I was there.

17

18

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22

Q. Did you participate in any way  
in the treatment of Baby Cook at that time?

23

24

A. No, I was just looking on.

25





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Q. Or did you have any involvement  
at any other time with Baby Cook?

4

5

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11

A. I noted that his intravenous  
looked a little bit interstitial or something later that  
night when I had been speaking to the team leader.  
I was just passing by and I looked over to see how  
he was doing and the baby looked fine but his butter-  
fly or intravenous which was in one of the veins here,  
just on the front of the baby's forehead, looked a  
little swollen. I brought this to Nurse Nelles'  
attention and she assured me that it was working fine.

12

13

14

Q. Other than that, did you  
have any contact at all with Baby Cook during the  
time that he was in the Hospital?

15

16

17

A. No.

18

19

20

21

22

23

24

25

Q. And you were not involved in  
the resuscitation attempts on Baby Cook later that  
night?

A. No.

Q. You by then were at home?

A. Yes.

Q. Were you in the Hospital on  
Sunday the 22nd, Doctor?

A. I cannot be sure of that. My  
impression is probably not. I am not 100 per cent sure.





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Q. Do you recall when you learned that Baby Cook had died in the early morning of March 22nd?

5

6

7

A. I certainly was aware of it on Monday morning. I think that is what makes me think I was not there on Sunday.

8

9

10

11

Q. Did you also learn that blood samples had been drawn from Baby Cook during the resuscitation and after his death for digoxin assay?

12

13

14

A. Yes, at what time I learned that, I'm not 100 per cent sure.

15

16

17

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19

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21

Q. Again, I take it, you subsequently learned of the digoxin levels recorded in those samples?

22

23

24

25

Q. Were you aware at the time you obtained the information as to the digoxin levels that digoxin had not been prescribed for Justin Cook?

A. That may have been mentioned at the same time, but I cannot remember if it was mentioned at the same time that the high levels were told to me.

Q. When those levels in Baby Cook's samples came to your attention did they serve to heighten your concerns about the events on the





1  
2 cardiology ward, events involving Estrella, Pacsai  
3 and Miller?

4 A. Yes.

5 Q. Did they serve to direct your  
6 thinking to one or the other of the two possibilities  
7 that you have told us about as explanation, that is  
8 to say, accidental overdose or intentional administra-  
9 tion?

10 A. I think it is fair to say  
11 that I was thinking more of intentional at that  
12 point in time.

13 Q. Just one other area that I  
14 would like to deal with if I may, Doctor, and it  
15 goes back to that one of your duties which involved  
16 your being in charge of the arrest team when you were  
17 on duty or on call.

18 In the period from July 1980 until  
19 mid-March 1981, you were involved, as I understand it,  
20 in a number of resuscitation efforts on the cardiology  
21 ward.

22 Let me read you the list of which I am  
23 aware and ask if you can recall any others.

24 You were, I think, involved in the  
25 resuscitation effort of Kelly Anne Monteith on  
August 19 and that arrest occurred at about 3:40 in







1  
2 the morning; that of Tony Velasquez on August 24 at  
3 3:20 in the morning; Matthew Lutes on November 17  
4 at about 12:30 in the morning; Jesse Belanger on  
5 December 28 at 7:30 in the evening; Jordan Hines on  
6 March 8 at 4 o'clock - 4:10 in the morning and, as  
7 we have already said, Michelle Manojlovish on March  
8 12 at 3:00 a.m. and subsequently, of course, that day,  
9 Pacsai, and that was end of it, as I understand it.

10 Do you recall any other arrests on the  
11 cardiology wards in the nine month period with which  
12 we are concerned in which you were involved?

13 A. No, I don't recall any other  
14 and some of --

15 Q. I take it, fairly, you do  
16 not even recall all of those in an individual way?

17 A. No. The only one that rings  
18 a bell as being different from the others now is  
19 Jordan Hines, and when I reviewed my notes for the  
20 police investigation or whatever of those cases  
21 there seemed to be an explanation that I had for  
22 each case except for maybe one, Belanger was one  
23 case I was concerned about.

24 Q. Looking back over your involve-  
25 ment in those arrests, as you later did in the course  
of the police investigation, did you remark upon the





1  
2 fact that of the six Code 25 that were called prior  
3 to Pacsai, up to and including Manojlovich, of those  
4 six, five had occurred in the early hours of the  
5 morning? Was that an observation that you made in  
6 looking back over the number of them?

7 A. It is difficult to know at what  
8 point in time I made the observation of them happening  
9 at night.

10 Q. But at some point in time you  
11 did make that observation?

12 A. Yes.

13 Q. And when you made it, did that  
14 seem to have any significance at all in your mind?  
15 Was it a fact to be remarked upon?

16 A. It is not unusual, it seems in  
17 my experience, even outside of this Hospital, that  
18 arrest situations happen during the nighttime.

19 Q. You have already told us that  
20 at some point in time it had occurred to you that the  
21 same nursing team had been present for one or more  
22 of these?

23 A. Yes.

24 Q. Did it occur to you as well  
25 that in all of the arrest resuscitation efforts  
that you had been involved in on the cardiology ward





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2

none of them were successful?

3

4

A. Well I think you have to take that in context of all of the arrests that happened in the Hospital at that time.

5

6

Q. That is fair.

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12

A. The arrests on the cardiology ward would be expected to have the least success because of the nature of their conditions. They are often postoperative surgical patients or whatever, and as I said previously there was an explanation, to my expertise, for certainly most, apart from Jordan Hines and, on review, maybe Belanger.

13

14

15

16

Q. I recognize the force of what you say, Dr. Costigan, that a child with a damaged, diseased heart is going to be more difficult to deal with in a cardiac arrest case than a child with a well heart.

17

18

19

20

21

22

A. Yes.

23

24

25

Q. I can understand that.

Therefore, it did not cause you any concern when looking back over the number that you had been involved in, that your batting average was not very good?

A. It had caused me concern and I had reviewed my own techniques, my drug administration,





1  
2 I had gone through all the little things, but at  
3 least I knew I had done what I thought to be  
4 appropriate in each of these situations.

5 Q. When you become involved in a  
6 Code 25 situation, Dr. Costigan, I take it  
7 obviously not before you get into the resuscitation,  
8 time is too precious, but at some stage you obtain  
9 some information about the child's course, about the  
10 events leading up to the arrest, that sort of thing?

11 A. Yes. That is probably one  
12 of the principal functions of the resident being  
13 present is to give you a summary, or from the nurse,  
14 as the arrest is proceeding, as to what the child's  
15 previous condition is and then later you review the  
16 events in the chart, or whatever.

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Q. Looking back over the half dozen cardiology ward arrests that you have been involved in, did you make any observation that in many of the cases the onset of critical symptoms leading to the arrest had been apparently a sudden one?

A. I hadn't made that observation.

Q. Or that those critical symptoms seemed to progress rapidly and over a short span of time from their onset to the arrest, had you made that observation?

A. No, I hadn't made that observation.

Q. Now, you have mentioned particularly the Hines case, and that I take it is a resuscitation effort that did stick in your mind?

A. Yes.

Q. For some reason?

A. Yes.

Q. What was it that made the Hines case stay in your mind?

A. It is probably a combination of factors.

Q. Would it help you to have the chart, Doctor?





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2

A. Maybe, yes.

3

MR. LAMEK: That is Exhibit 103, sir.

4

Q. Are you looking at any particular page, Doctor?

5

6

A. I am sorry, I'm looking at page 69 and 70 I think, and 71.

7

Q. Thank you.

8

That is your arrest note, is it?

9

10

11

12

13

A. Yes. The initial thing that was unusual I guess was the appearance of the arrhythmia when I arrived at the arrest scene. It appeared like the child was in ventricular fibrillation which is unusual to see as the initial presentation of an arrest in this young population of patients.

14

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16

17

Q. You say that is unusual, is that based upon your experience of paediatric patients generally, or upon your experience of paediatric/cardiology patients?

18

19

20

21

A. It is based upon my experience of paediatric patients generally and, you know, it is very difficult to separate what you learn from cardiology experience and what you learn from paediatric experience.

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Q. Well, as you may know, Doctor ---

A. And from knowledge, you know





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Q. Are you now aware that, of the children who died on the Cardiology Ward in the nine-month period that we are interested in, two of them; that is to say, Hines and Pacsai, had anatomically normal hearts?

A. Yes, I am aware of that.

Q. And, therefore, in that respect, they were not damaged heart children?

A. That is right, yes.

Q. And I suppose an experience based on even general pediatric background would be of assistance for these two, would it not?

A. I am not quite sure if I follow what you are saying.

Q. Well, they didn't have anatomical problems in the heart.

A. That is right, yes.

Q. You found ventricular fibrillation as an arrhythmia unusual?

A. Yes.

Q. And remarked upon it because it occurred in the Hines case?

A. Yes.





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Q. As, indeed, you subse-

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quently remarked upon it in the Pacsai case?

4

A. Yes.

5

Q. Was there anything else

6

about the Hines situation that struck you as unusual?

7

A. Well, the child exhibited

8

an extreme degree of ventricular irritability. What

9

I mean by that is that, even though the child wasn't

10

fibrillating all the time, the child had premature

11

ventricular beats, which are warning signs of

12

ventricular fibrillation, and evidence of ventricular

13

tachycardia, and, you know, and in spite of lidocaine

14

and various medications used to combat this type of

15

problem that occurred here; the ventricular

16

Q. Was there any other

17

particular feature of the Hines case that caused

18

it to stick in your mind as out of the ordinary

19

or unusual?

20

A. Well, we had -- it was a

21

very long arrest and we had been quite successful

22

in keeping the child well oxygenated and profused,

23

and we had a blood gas -- we had one period of time

24

where the child took over his own pumping action;

25

we managed to get the blood gas, and it was very







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good for that sort of situation. And that sticks  
out as to what I found.

3

4

Q. You mean there was a  
point in this resuscitation where you thought you  
had brought the child back?

5

6

A. Well, we had held on  
very well and we were doing well at one point.

7

8

Q. And, unhappily, it  
didn't work out that way?

9

10

A. No.

11

Q. Doctor, do you see, other  
than ventricular fibrillation, do you see any other  
points of comparison or parallel between the Hines  
case and the Pacsai case, or did you remark upon any  
at the time?

12

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A. Well, I mean, at the  
time, I only knew of Hines.

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Q. I mean and Pacsai.

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A. I remember thinking, after I discovered about Pacsai's digoxin, I remember thinking oh, could Baby Hines have been a similar episode, a similar cause, similar to each other.

Q. Doctor, at page 40 of the chart, and it is a rather faint number on my copy I have to tell you, it is the Death Certificate in any event that is what I am looking for.

A. Yes.

Q. That was completed, is that Dr. Kobayashi?

A. Yes.

Q. Was he involved in the resuscitation?

A. I can't remember him, but, you know, I am sure you can check it some other way, but I can't remember.

Q. Is the completion of the Death Certificate a task that is normally assigned to someone other than the leader of the Arrest Team?

A. It is - I am trying to think, normally it is done by the person who is responsible for the care of the patient on the longer term, and he I think approached the family, one of the doctors I believe had been speaking to the parents





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before, I guess one of the resident doctors on the ward approached the family for permission for a post mortem.

Q. Do you recall any discussion with Dr. Kobayashi as to the cause of death that should be stated?

A. No.

Q. Did you, following the cessation of the resuscitation efforts in the case of Jordan Hines, did you have any opinion as to the probable cause of that death?

A. I didn't have any definite cause. I think there was a previous note about some arrhythmias and sinus conduction abnormalities.

Q. Yes.

A. Either made by clinical observation or one of the cardiology people, or based on some electrocardiogram or whatever, and I wondered whether this was a manifestation of this abnormality of conduction that somebody had proposed.

Q. Following the death of Jordan Hines did you have any conversation with his parents?

A. Yes.

Q. And how did that come about and for what purpose did you have a discussion?





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A. I learned that - I can't remember which resident, had asked for a post mortem and it had been refused. I felt that this was a case that we needed a post mortem on because there was a lot of questions that I didn't understand. So I approached the parents, who I had never met before and tried to explain what happened and my concerns about what happened, and how we could learn some more information, and I thought learn more information by looking at the conducting tissue in the heart. I was asking even for a more limited post mortem so we could just look at the heart situation. But eventually they agreed to a post mortem.

Q. You said a few moments ago that following the Pacsai death, and the digoxin disclosures within the next few days, it occurred to you to wonder whether Jordan Hines might have had some digoxin involvement, did I understand you to say that?

A. Yes.

Q. Were you aware at that time that digoxin had not been prescribed for Jordan Hines?

A. I wasn't aware of that.

Q. Did you subsequently become







1

2

aware of that?

3

A. I did, much later. I didn't

4

actually return to the chart and check out that

5

possibility.

6

Q. Did you subsequently learn,

7

by subsequent I mean now many months later, that the

8

body of this child was exhumed and tissues were

9

assayed to determine the presence of digoxin and

10

there was an apparently positive finding of digoxin

11

made in those tissues. Did you subsequently learn

that?

12

A. Yes.

13

Q. At the time that you learned

14

that, what effect, if any, did that have upon the

15

question that you had raised following Pacsai's

16

death as to the possible involvement of digoxin in

the Hines death?

17

A. The problem with that was

18

that contemporaneous with me learning about the

19

level of digoxin from Baby Hines there was a lot

20

of controversy about the validity of the measurements

21

or whatever, but it did serve to reinforce my

impression.

22

Q. I am not too concerned about

23

the reliability of the level recorded, so much as

24

25





1  
2-5 2 the indication of the simple presence of digoxin?

3 A. Yes.

4 Q. Is that something that  
5 occurred to you as a reinforcing element in the  
6 concern that you have already told us about with  
7 respect to the Hines' death?

8 A. Let me say that I understand  
9 a lot of the problems that can happen with assays  
10 and procedures and things. Just like my skepticism  
11 of other investigations earlier I was still a little  
12 skeptical with that information.

13 Q. Doctor, I don't want to take  
14 you into the field of pharmacology, I know you don't  
15 profess any expertise there and I won't tax you  
16 with it.

17 May I simply ask you whether, subject  
18 to the resolution of those proper pharmacological  
19 questions by properly qualified people, subject to  
20 that, do you still have a concern about the death  
21 of Jordan Hines and the possibility of digoxin  
22 involvement in that death?

23 A. Yes.

24 Q. Dr. Costigan, I have one  
25 final question and it goes back to the Estrella  
case. You learned of that ---





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2

THE COMMISSIONER: You say one final question, did the Doctor volunteer some problem about Belanger, can we have that.

4

5

MR. LAMEK: About Belanger, I'm sorry, I didn't catch that.

6

7

THE WITNESS: Just when I was reviewing the records of the note that I had made.

8

Q. Yes.

9

A. Last night ---

10

11

Q. Would it be helpful to have that chart, Doctor?

12

A. Yes.

13

Q. It is Exhibit 79, I am sorry.

14

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A. The observation that I made obviously to the police that is recorded in my records, not here, but in my own records, is not reflected in the actual note written at the arrest, it was obviously made from a review of the chart at the time about whether this was expected or unexpected.

20

21

22

Q. This was the case as I recall it, Dr. Costigan, in which at the time of the death you did not see an immediate and ready explanation for it, is that it?

23

24

25

A. Yes.





Costigan, dr.ex.  
(Lamek)

1

2

Q. There is nothing in

3

particular that now jogs your memory about the

4

Belanger case, other than that feeling that you

5

didn't see a ready explanation for the death at the

6

time that it occurred?

7

A. Yes, just going back over

8

the cases that I could explain and I couldn't explain,

9

it was one of the ones that I could not explain.

10

THE COMMISSIONER: Do I understand in  
all of this list Hines and Belanger were the only two  
that you felt could not be explained?

11

12

THE WITNESS: Well, that was my  
impression. There was one child who had an aspiration  
of stomach contents. There was another child who  
had a reaction after a medication was given. You  
know, there seemed to be a precipitating cause in  
the other cases.

13

14

15

16

17

THE COMMISSIONER: That is all you  
wanted to say though about Hines and Belanger is  
that you saw no further explanation, and I take it  
you still see no further explanation?

18

19

20

THE WITNESS: That is correct, yes.

21

22

MR. LAMEK: Q. Can I just follow that  
up a moment, Doctor. Indeed it is interesting that  
you named Belanger there. Did you become aware that

23

24

25







Costigan, dr.ex.  
(Lamek)

1  
2 Belanger was another child for whom digoxin was not  
3 being prescribed?

4 A. No, I wasn't aware of that.

5 Q. Did you become aware that  
6 Belanger was a child whose body was exhumed and in  
7 whose tissues there was positive findings of digoxin?

8 A. No, I wasn't aware of that.

9 Q. Was the question that you had  
10 about Belanger in any way similar to that which you  
11 had about Hines; that is questioning the possibility  
12 of digoxin intoxication in the death of that child?

13 A. No. The question about  
14 Belanger just arose on reviewing the cases that I  
15 was involved in. Just seeing, was there anything that  
16 I could explain or couldn't that were unexpected to  
17 me, and Belanger and Hines were the only unexpected  
18 ones.

19 Q. I won't take it any further  
20 than that with you, Doctor. Thank you.

21 Could we just go back quickly to the  
22 occasion of your learning about the Estrella case  
23 on the Saturday morning from Dr. Taylor in the  
24 Pathology Department. You had gone down to ask for  
25 a Millars sample to be drawn and analysed and he  
mentioned the Estrella case?





Costigan, dr.ex.  
(Lamek)

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2

A. Yes.

3

Q. I don't think I asked you this,

4

Doctor, if I did forgive me; when he told you about  
the Estrella case did Dr. Taylor say or indicate there  
was any concern about the contamination of the sample  
which was analysed in the Estrella case?

5

6

2-9

7

A. What you say jogs my memory

8

a little bit, but I am not sure whether I am mixing  
that up with our discussion about how to take a  
sample for digoxin post mortem.

9

10

11

Q. And what you might have heard  
later about it?

12

A. Yes.

13

14

Q. As I recall your evidence

15

this morning you said he told you that being this  
high level, in the seventies, and they didn't know  
what to make of it?

16

17

A. Yes, that was my impression,  
yes.

18

19

MR. LAMEK: Dr. Costigan, thank you  
very much indeed.

20

THE COMMISSIONER: Mr. Roland.

21

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MR. LAMEK: Mr. Commissioner, may I  
just say one thing. It has occurred to me often in  
the course of these cross-examinations that it may

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be that not every witness knows whoever his counsel  
may be or who his client may be and it may be helpful  
to the witness if counsel could identify themselves  
before they begin to cross-examine. I know I would  
be awfully puzzled if I was sitting there.

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THE COMMISSIONER: Well, it happens quite often that they do identify themselves and it might be of assistance. I am not going to make it a rule though.

MR. LAMEK: I am not suggesting Mr. Roland needs to identify himself.

THE COMMISSIONER: I think he probably knows who Mr. Roland is, I hope he does.

MR. ROLAND: Yes, I have spoken to Dr. Costigan briefly this morning and I think Dr. Costigan knows that I act on behalf of the Hospital.

EXAMINATION BY MR. ROLAND:

Q. Dr. Costigan, dealing with the Pacsai case for a moment. Did you know that that case had been reported to the Coroner?

A. Yes.

Q. When did you first learn of that?

A. That morning after the arrest.

I'm not sure what I was doing but I came back around, I was around the Intensive Care Unit and Dr. Schaffer took upon himself to write a note I think and he was discussing with Dr. Fowler I think who was present and they were phoning the Coroner. I think I actually saw them dialing the Coroner at that time.

Q. Did you know the reason that they







1  
2 had called the Coroner?

3 A. Well, my impression was that it  
4 was just because of the unusual nature of the arrest  
5 but subsequently I learned that there had been some  
6 difficulty with the father of the child I think.

7 Q. But at the time you thought it  
8 had to do with the nature of the arrest?

9 A. Yes.

10 Q. So, I gather you knew from that  
11 moment on that the Coroner may very well be involved  
12 in a rather detailed investigation of the Pacsai death?

13 A. Yes, yes.

14 Q. All right. And in the Pacsai  
15 case you wrote on the chart that digoxin toxicity was  
16 one of the possibilities that you were concerned with  
17 both during life and I gather after the arrest of  
18 Baby Pacsai. Certainly during life were you thinking  
19 about digoxin toxicity as a therapeutic or response to  
20 a therapeutic dose?

21 A. Yes. What I was really consider-  
22 ing was a relatively mild degree of digoxin toxicity as  
23 opposed to a digoxin poisoning or very excessive level  
24 of digoxin. I was more thinking of what might happen  
25 if renal function was poor or there was some other  
problem, the dose was a little much for the baby's





1  
2 ability to handle. You know, I wasn't thinking of  
3 anything more.

4 Q. Yes. I take it it is in that  
5 therapeutic context, as you say a mild situation of  
6 digoxin toxicity that was in your mind both at the  
7 time that you observed Baby Pacsai on the 4A ward and  
8 later in the ICU?

9 A. Yes.

10 Q. Yes. It was in following up  
11 that suspicion of yours I take it that you sought out  
12 a sample of Baby Pacsai's blood to have a dig. level  
13 run on it?

14 A. Yes.

15 Q. After you learned of the arrest  
16 of Baby Pacsai?

17 A. Yes. Subsequently during that  
18 day I reflected I guess upon the events.

19 Q. Yes.

20 A. And it was then I decided that  
21 I should see what the digoxin level was.

22 Q. Yes. And you have told us about  
23 the results of your efforts to obtain a digoxin level  
24 on Baby Pacsai and that you went to see Dr. Fowler in  
25 his office on, you think it was the Tuesday evening?

A. Yes, like, Tuesday afternoon,





1

2

some time, 3 or 4 o'clock.

3

Q. I see.

4

A. That's the time that I think it

5

was.

6

Q. I see, all right. You say you

7

told him briefly about what you knew at that stage  
about Baby Pacsai?

8

A. Yes, I think I told him

9

completely what I knew, you know, everything that had  
happened.

10

11

Q. Yes. You say his response was

12

one of concern and that he left his office with you  
and appeared to go to the ward?

13

14

A. Yes, I interrupted him in his

15

office where he was doing some work or something and  
he obviously --

16

THE COMMISSIONER: I didn't know that

17

he had said he left with Dr. Fowler. Perhaps you did.

18

Did you leave with Dr. Fowler?

19

THE WITNESS: Yes, we both left

20

together and he went up and I went down or something  
like that.

21

MR. ROLAND: Yes, that is what I

22

understood this morning.

23

THE COMMISSIONER: Well, I thought that

24

25





1  
2 Dr. Fowler, just prior to leaving his visitor in the  
3 office, but I don't think it really matters that much.

4 MR. ROLAND: Q. In any event, you  
5 say that Dr. Fowler mentioned to you that there had  
6 been some sort of a medication earlier, that he was  
7 familiar with some medication error?

8 A. No, my recollection of this is  
9 not very precise but the impression I have was that,  
10 it was an impression that he gave me that, you know,  
11 there was some problem on the ward or whatever and that  
12 he would go and see about it or whatever.

13 Q. At that stage were you aware  
14 that there had been only a few days before a medication  
15 error concerning digoxin with Baby Inwood?

16 A. No.

17 Q. No. That's not something you  
18 knew about?

19 A. No.

20 Q. No.

21 Thank you, those are all my questions.

22 THE COMMISSIONER: Yes, all right. I  
23 am sorry, Mr. ...?

24 MR. SADVARI: Sadvari.

25 THE COMMISSIONER: Mr. Sadvari. How  
are you?







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MR. SADVARI: Fine, pleased to meet you.

THE COMMISSIONER: Would you like to take over? He has to introduce himself to me as well as to you, Doctor, but he is acting for you I guess.

MR. SADVARI: We have been introduced, yes.

THE COMMISSIONER: Yes. Very well, Mr. Sadvari.

MR. SADVARI: In fact, I have no questions at this time.

THE COMMISSIONER: Oh.

MR. SADVARI: But I thought you might like to meet me.

THE COMMISSIONER: Well now, Mr. Brown?

MR. BROWN: I have no questions, Mr. Commissioner.

THE COMMISSIONER: Miss Forster?

CROSS-EXAMINATION BY MS. FORSTER:

Q. Doctor, first of all, I would like to take you to the evening when you went to the ward with Dr. Mounstephen to collect the digoxin. I take it you were the one that was responsible for going to wards 4A and 4B?

A. Yes, that's my recollection.





1

2

Q. And you investigated the crash

3

carts on those wards?

4

A. Yes.

5

Q. How many crash carts were there?

6

A. There was two crash carts to my  
recollection.

7

8

Q. I take it from your chart that  
you didn't find any digoxin on either of those crash  
carts?

9

10

A. Yes.

11

12

Q. Do you recall what you did see  
on the crash carts by way of medication?

13

14

15

16

A. Oh, it would be hard for me to  
remember what ones were there because I know sort of  
automatically what is on the crash cart and it would  
be hard to know what was there that night and what  
wasn't there.

17

18

19

Q. All right. Well, what is  
normally on the crash carts on wards 4A and 4B at that  
time?

20

21

22

23

24

25

A. Well, the crash carts are usually  
supplied in a relatively uniform fashion and the  
medications that they usually contain are things like  
bicarbonate, things like intravenous solutions, there  
is a drawer with all the equipment necessary for





1  
2 intubation, there is ampules of adrenaline and ampules  
3 of xylocaine or lidocaine as it is known.

4 Q. Are there any other standard  
5 medications you find on the crash carts in the fourth  
6 floor?

7 A. I am going back two years now.  
8 I mean, I don't think the fourth floor was really any  
9 different from any other crash cart anywhere else.  
10 Occasionally I think there would be some propranolol on  
the crash carts as well.

11 Q. Did you ever have occasion to  
12 see digoxin on the crash carts on wards 4A, 4B?

13 A. In my experience before?

14 Q. Yes.

15 A. No.

16 Q. You indicated the medication on  
17 the crash carts was fairly standard throughout the  
hospital?

18 A. Yes.

19 Q. Can you explain why you or  
20 Dr. Mounstephen would have found digoxin on some crash  
21 carts and not on others?

22 A. No. I'm not aware at that point  
23 in time who was responsible for stocking the crash  
24 carts with digoxin.  
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Q. Now, you mentioned that on the crash carts you found IV solutions. Are those the plastic bags full of --

A. Yes, they usually contain, like, normal saline or dextrose or that sort of thing.

Q. And the ampules you found, are those the ampules that would often be injected to the IV bag or the IV bolus?

A. Well, ampules come in different - at that point in time I think the majority of the medications were in what is called technically ampules which are the small glass vials with the break-off or file-off top. That would be drawn up and then used either directly, intravenously or whatever route.

Q. Would those be the same type of small glass vials that you would expect to find digoxin in?

A. Yes, they are the same, approximately probably the same size as far as I know.

Q. And how were the medications stored? Were there single ampules lying around in the carts or was there any system for organizing the medication?

A. Just to complete what I said earlier, there was also a couple of pre-filled syringes







1  
2 for medications like bicarbonate or xylocaine. These  
3 are syringes that are made up sterile and you just  
4 actually break the seal and you use them directly for  
5 the administration.

6 Then your question about the order of  
7 events or the order of the ampules on the crash cart.  
8 I can't remember what system they had for storing them  
9 or keeping them one separate from the other or whatever.

10 Q. Well, would you find loose  
11 ampules floating around in the cart? Do you find them  
12 in boxes, do you have any recollection at all?

13 A. Oh, well, they are usually in one  
14 drawer if they are assigned to the medication or on a  
15 tray on top that would contain the medication.

16 Q. Okay, and would this be a single  
17 ampule of each kind of drug in this drawer or the tray?

18 A. My recollection is that there  
19 would be a mixture of one or two of each of the different  
20 preparations.

21 Q. All right. But when you are  
22 talking about a mixture of one or two of the preparations  
23 are you talking about one or two ampules of each kind of  
24 preparation?

25 A. Yes there was, yes.

Q. And these ampules, are they all





1

2

clear glass?

3

A. Yes. Yes, most of them are clear

4

glass. There are a couple of drugs that are photo-  
sensitive that are kept in brown glass vials.

5

6

Q. What drug are those?

7

A. Well, I am sure there is quite

8

a list but one that springs to mind is valium or  
diazepam which is kept in the dark. But I am sure  
there are others.

9

10

Q. Are valium and diasapan

11

normally found on the crash cart?

12

A. Not normally, no. I'm not sure

13

on that point but I don't think so. It is used for  
the treatment of convulsions but I don't think it is  
normally kept on the crash cart.

14

15

Q. Okay. And digoxin I take it is

16

in a clear glass ampule?

17

A. Yes.

18

Q. What about heparin, did you find

19

that on the crash carts on wards 4A and 4B?

20

A. We specifically weren't doing an

21

inventory of other medications, we were really doing  
an inventory of digoxin. So, I can't record or

22

recollect or I didn't record whether we found heparin  
or not.

23

24

25





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Q. Is that something that is often  
kept on a crash cart?

4

A. I can't say, I don't think so.  
I don't think it is normally kept on the crash cart.

5

6

Q. And what about epinephrine, do  
you recall seeing that on the crash carts?

7

8

A. Yes, that is usually on the  
crash cart, yes. Did I say adrenaline earlier; they  
are synonomous.

9

10

11

Q. And they are also in clear  
glass ampules?

12

13

A. My recollection is yes. It is  
a couple of years since I have seen an ampule of it.

14

15

Q. During your search I take it you  
also went to the medication rooms on the fourth floor?

16

17

A. Yes.

18

19

Q. And there is a medication room  
in both ward 4A and 4B?

20

21

22

23

24

25

Q. Can you explain how the  
medications are stored in those medication rooms?

A. My understanding of it is not as an  
expert as regards the situation because my knowledge  
of the situation really was based from my experience  
and it was that there was a limited number of





1  
2 medications kept under lock and key and then there was  
3 the rest or the remainder of the medications which  
4 were then kept in an ordinary unlocked cupboard.

5 Q. Now, first of all dealing with  
6 the medications that were kept under lock and key.  
7 Where physically were they kept in the medication  
8 rooms?

9 A. Well, specifically talking about  
10 4A and 4B where they had a modernization, my  
11 recollection is that the locked press was in the  
12 little medication room that you described.

13 THE COMMISSIONER: When you say a  
14 little medication room, a room that is just a  
15 cupboard?

16 THE WITNESS: No, it is a bit more  
17 than a cupboard. It is a little difficult to describe.

18 MS. FORSTER: Q. Doctor, maybe I  
19 can assist you. As I understand the set-up of the  
20 medication room there is a counter and underneath the  
21 counter there is a stainless steel drawer.

22 A. Yes.

23 Q. That is kept locked.

24 A. Is that it, yes. I remember the  
25 counter all right and my impression though of the lock  
was a little thing above the counter but I can't be







1

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sure.

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4

5

Q. Was there a drawer under the counter where the medication, some medication was kept locked up?

6

A. I don't remember that drawer, no.

7

Q. You don't remember. Was it mostly --

8

9

10

11

12

13

THE COMMISSIONER: Could we just pause briefly for the location of this medication room. If we look at the Statement of Facts there is an Appendix C in the Statement of Facts. I am going to show it to the Doctor. See if you can locate - this is supposed to be the medication.

14

THE WITNESS: It is like this here.

15

16

17

THE COMMISSIONER: Pointing to the two and they are black squares which are adjacent to the nurses' station which is in the centre corridor between wards 4A and 4B.

18

THE WITNESS: Right.

19

20

THE COMMISSIONER: And which one of these - well, I suppose you went to both?

21

THE WITNESS: Both, yes.

22

THE COMMISSIONER: Yes, all right, thank you.

23

24

25

MS. FORSTER: Q. Doctor, as I





1  
2 understand it, both medication rooms on 4A and 4B are  
3 identical in their set-up. Is that your recollection?

4 A. Yes.

5 Q. And they are very small, aren't  
6 they, there is only room for about maybe one or two  
7 people in the room at a time. Would you agree?

8 A. Well, maybe three or four.

9 Q. Small.

10 A. Okay.

11 Q. Now, dealing with the medication  
12 that was locked up on 4A/4B, was that basically  
13 narcotic type medication?

14 A. Yes, that is my understanding  
15 that it was medication that was under the Narcotic  
16 Act or whatever.

17 Q. Do you recall how the other  
18 drugs were stored in the medication room?

19 A. My recollection was that for,  
20 say, oral medication they were in bottles with the  
21 name of the child on the bottle.

22 Q. Do you recall in the medication  
23 room seeing shelves above this counter where the  
24 medication was stored?

25 A. You are testing my memory too.  
I can't really remember.





1

2

Q. You mentioned that the medication was stored with the child's name on it?

3

4

A. That's my recollection, yes.

5

6

Q. Well, for example, was digoxin, it is conceivable that several children on 4A/4B could be on digoxin at the same time I take it?

7

A. Yes.

8

9

Q. And how would the digoxin then be stored in the medication room?

10

11

12

A. Again I am not a hundred percent sure but my impression was that each child had their own bottle. You would have to check that with either pharmacy or nursing.

13

14

Q. And when you refer to the bottles, would that be the elixir digoxin?

15

A. It would be the oral preparation.

16

17

Q. All right. What about ampules of medication, how was that stored?

18

19

A. My impression was that the ampules were also stored in the medication room.

20

Q. Yes?

21

22

23

A. But I don't remember where they were stored in the medication room. I know they weren't stored prior to that time in the locked cupboard.

24

25





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Q. I am sorry, I didn't hear what  
you said.

3

4

A. Well, what I said was that I was  
aware that they were not stored in the locked cupboard  
at that time.

5

6

Q. They were not?

7

A. Yes.

8

9

Q. Do you recall whether the  
ampules were stored with the child's name on them?

10

11

A. I don't think so but I don't  
know for definite.

12

13

Q. Do you recall whether the  
ampules were stored in the same place as the bottles  
of medication, the oral preparations?

14

A. I am sorry, no, I can't.

15

16

Q. Now, on Exhibit 205, which is  
your inventory, do you have a copy of that in front of  
you, Doctor?

17

18

A. Yes.

19

20

Q. Let's take for example ward 4A/B,  
you have a column Room .25 times 10. What does that  
mean?

21

22

23

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A. It meant that in the medication  
room we found 10 ampules containing the more  
concentrated form of digoxin .25 milligrams, I think







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it was .25 milligrams per ml.

Q. And then I take it .05 times 10 means you found 10 ampules containing .05 milligrams, is that correct?

A. Yes.

MS. FORSTER: Mr. Commissioner, I am about to get into another area and I thought this might be a convenient time.

THE COMMISSIONER: Yes, all right, we will rise now until 2:30. Would it help, Mr. Lamek, if we had some indication, or do you care?

MR. LAMEK: Yes, it would help greatly, Mr. Commissioner.

THE COMMISSIONER: Yes. Can you give us an idea, to start with you, Miss Forster?

MS. FORSTER: I would think I would be 15, 20 minutes, sir.

THE COMMISSIONER: Yes. Mr. Hunt?

MR. HUNT: I can't be precise but if it all it won't be very long.

THE COMMISSIONER: Mr. Young?

MR. YOUNG: Mr. Commissioner, Mr. Percival mentioned to you yesterday that he is at the Law Reform Commission and would welcome an opportunity to cross-examine.





1  
2 THE COMMISSIONER: Oh, yes, I promised  
3 him faithfully. Yes, you are quite right. Well, it is  
4 up to everybody else to drag this thing out at least  
5 until tomorrow morning.

6 MS. SYMES: Thirty minutes or so,  
7 Mr. Commissioner.

8 THE COMMISSIONER: All right, thank  
9 you. Well, will the rest of you gentlemen be  
10 prepared then - I guess just gentlemen - be prepared  
11 to do your cross-examination this afternoon, I don't  
12 know, that is if you don't run out because I promised  
13 Mr. Percival that he would not be called on to cross-  
14 examine him until tomorrow morning.

15 MR. LAMEK: Thank you, sir.

16 THE COMMISSIONER: All right.

17 MR. BROWN: Mr. Commissioner, before  
18 we go, Mr. Lamek has kindly provided us with a list of  
19 the witnesses to be called in the remainder of Phase 1.  
20 If I might ask him through you to identify Dr. Fay,  
21 that name is not familiar to me. Perhaps he could  
22 give me some idea of who either he or she is.

23 MR. LAMEK: Yes. Dr. Fay was another  
24 cardiologist I believe who was a consultant to the  
25 police in their investigation and who, like Dr.  
Hastreiter, reviewed all these files and formed a





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medical judgment as to the categorization of their  
deaths as either being natural or suspicious, that  
sort of a thing.

4

5

MR. OLAH: Mr. Commissioner, were  
there any documents generated by Dr. Fay? We've got  
Dr. Hastreiter's reports.

6

7

MR. LAMEK: Yes, there is a report by  
Dr. Fay.

8

9

MR. OLAH: Could we have it?

10

MR. LAMEK: No reason why it shouldn't  
go out ahead of time, Mr. Commissioner, no surprises.

11

12

MR. OLAH: Thank you.

13

MR. LAMEK: Okay.

14

THE COMMISSIONER: Anything else?  
Then until 2:30.

15

16

--- Luncheon recess

17

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AA  
DP/cr

1 ---On resuming at 2:30 p.m.

2 THE COMMISSIONER: Yes, Miss Forster.

3 MS. FORSTER: Thank you.

4 Q. Doctor, I told you before  
5 lunch that I had finished with the subject of the  
6 crash carts, but a few other questions have come to  
7 mind over the lunch hour.

8 I would like to show you a portion of  
9 what has been marked as Exhibit 131 and ask you if  
10 you can tell me whether these are the type of  
11 ampules that you found on the crash cart?

12 A. Yes, they looked like that,  
13 yes.

14 Q. I take it that while you were  
15 searching for digoxin, you picked up each ampule and  
16 read it carefully?

17 A. Yes.

18 Q. Because otherwise you would not  
19 have been able to tell what drug was in the ampule,  
20 would you?

21 A. Obviously, yes.

22 Q. The writing on the ampule is  
23 quite small, is it not?

24 A. Yes, but I have good sight.

25 Q. I am standing now roughly  
three or four feet from you. Are you able to identify







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2

for me what are in the ampules I am holding in my  
hand?

3

4

A. No.

5

Q. In all fairness I will show  
them to you, and you can read them and identify them.

6

7

A. Lanoxin, Injection of Digoxin  
.25 mg per ml.

8

9

Q. And you are referring to the  
larger ampule in black writing?

10

11

A. Yes. And this one is Paediatric  
Lanoxin Injection of Digoxin .05 mg. in ml.

12

13

Q. And that is the smaller ampule.

14

15

Doctor, I noticed on your inventory  
that you did find digoxin on the crash carts in  
Ward 4C. Were you the doctor that attended on Ward  
4C or was that Dr. Mounstephen?

16

17

18

19

A. My impression is that it was  
Dr. Mounstephen. I cannot remember authoritatively  
but my impression was it was Dr. Mounstephen.

20

21

Q. I take it Ward 4C is on the  
same floor as Wards 4A and B?

22

23

24

25

A. Yes, it is across the corridor.

Q. What kind of a ward is it?

A. 4C is considered a general





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infant ward. Usually the children being taken care of there would have a mixture of conditions, admitted through the Emergency Department, or whatever, and they would usually be less than 5 years of age.

Q. Would you expect to find digoxin on the crash carts in Ward 4C?

A. My impression was that I did not really expect to find digoxin in any of the crash carts.

Q. Turning to Baby Pacsai, I take it that prior to March 12th you had no involvement in the care or treatment of that child?

A. To my recollection, no.

Q. You indicated that you had cause to examine Pacsai after you were requested by the nurses or one of the residents who was concerned about the child. Is that correct?

A. Yes.

Q. After your initial examination you said that you went to the ICU to discuss the child with Dr. Lynn?

A. Yes.

Q. When you came back to the ward you were told that the child had had an episode of bradycardia and apnea. Is that correct?





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A. Yes.

3

4

Q. Were you told whether  
resuscitation efforts were undertaken as a result  
of that episode?

5

6

7

8

9

A. My recollection of it was that  
there had been - what we call bagging - the child  
had received some ventilation, not quite mouth to  
mouth but using an apparatus to administer. That  
is my recollection of the event.

10

11

Q. If I can assist your memory,  
Doctor, do you have the Pacsai record in front of you?

12

A. Yes.

13

Q. If I could refer you to page  
65 -

14

A. Yes.

15

16

17

Q. There is a nursing note by  
Nurse Nelles in the bottom half of the page, on the  
third line up from the bottom, underlined, it says:

18

19

"Babe stopped breathing 5/10 seconds.  
Bagged for short time and seemed to  
come around."

20

Is that consistent with your recollection?

21

A. Yes.

22

23

Q. Can you tell me what is  
involved in the process of bagging the child?

24

25





1  
2 A. The fundamentals are that the  
3 child stops breathing or holds his breath for more  
4 than a normal period of time and what the actual  
5 bagging does is it is just a bag with a valve and  
6 either can administer air, or air and oxygen, or  
7 oxygen, and what one does, one squeezes the bag and  
8 through a valve mechanism the air comes out through  
9 a face mask, usually, and you just apply this over  
10 the baby's face in a manner that you usually hold  
11 the jaw forward to open the airway, so you can  
12 breathe for the baby in not a very efficient manner  
13 but depending on the expertise of the person.

13 Q. Is this bagging accompanied  
14 by any kind of cardiac massage or any other kind  
15 of treatment?

15 A. It depends on the situation,  
16 but bagging of its own, as it is called, is just  
17 respiratory.

18 Q. Are you aware of any other  
19 resuscitation methods given to Pacsai at the time  
20 of that episode, other than the bagging?

21 A. No, from my recollection it  
22 was just bagging.

22 Q. And you told us at the time  
23 Baby Pacsai was transferred to the ICU you were  
24  
25







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entertaining two possible diagnoses, either Sick

3

Sinus Syndrome or digoxin toxicity. Is that correct?

4

A. Yes.

5

Q. You told us that when the

6

baby was in the ICU you drew samples for a CBC

7

and for an electrolyte study?

A. Yes.

8

Q. And in addition you ordered

9

that a dig. level be taken?

10

A. Yes.

11

Q. And you indicated that you

12

expected that level to be taken some time around

13

8 or 9 the following morning?

A. Yes.

14

Q. Doctor, if you had a concern

15

about digoxin toxicity, why did you not order that

16

the dig. level be taken immediately?

17

A. Because it would not have

18

hurried things up, really, because the assay was

19

being done routinely and that was usually done every

20

day type of thing, in a routine fashion.

21

Q. But, Doctor, if the assay

22

revealed that the child was in fact suffering from

23

dig. toxicity, would you not be concerned about

24

taking steps to deal with that condition as quickly

25





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as possible?

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A. Yes, but for that situation in the Hospital as it was at that present time where the results of your digoxin assay were not available for 12 hours or 24 hours, you had to go on clinical judgment.

Q. Is it not possible to get dig. levels done more quickly in situations where you were concerned?

A. At that time, no. It was done in a routine fashion. I do not know what procedure you would have to go about but you probably would have to call in the clinical chemist to try and organize a digoxin level.

Q. So if I took my child to the Emergency Department because he had just consumed some of my Grandmother's digitalis, are you telling me that they could not get a level done immediately to determine the severity of the overdose?

A. What I am saying is that they could phone - explain the situation to the clinical chemist who provides the service, there is one of them on call, and he would go through the situation with you and if both of you felt it was necessary he would send somebody in. Again it would





1

2

take, I would imagine, a few hours.

3

Q. Did you do that in the case

4

of Baby Pacsai?

5

A. No.

6

Q. Why not?

7

A. Number one, because at this

8

time it was 5 or 6 in the morning and I was expecting

9

that we would have our samples to the laboratory for

10

the routine work by 8 or 9 o'clock, and that it would

11

take as long, I am sure, to organize a special run

as it would for things to take their normal course.

12

Q. After the child's arrest, you

13

wrote a note in the record which is found at page

61.

14

A. 61?

15

Q. Yes - is it 67, I am sorry.

16

At the bottom after your signature

17

you put: "Question - How did potassium get from

18

3.7 to 7.7 in less than 12 hours"?

19

A. Yes.

20

Q. And you indicated to Mr.

21

Lamek that at that time the possibility of potassium

22

administration occurred to you. Do you recall that

evidence?

23

A. Yes, I reviewed the possibilities.

24

25





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In fact I even mentioned in my note "without any  
having been given" and the child had no renal failure  
or any other obvious explanation to me at the time  
for the high potassium.

5

6

Q. How would potassium be  
administered to a child?

7

8

A. There are, I guess, a legion of  
ways it could be done but the commonest way I suppose  
would be a medication error.

9

10

Q. As I understand it, potassium  
is produced naturally in the body, is it not?

11

12

A. Well, let us say, it is  
present and conserved, and its levels are controlled  
fairly accurately.

13

14

Q. Is it also possible to  
administer potassium to a person?

15

16

A. Oh, yes.

17

18

Q. This is a form of medication  
that would be given to some patients under some  
circumstances?

19

20

A. Yes, patients with problems  
of low potassium or a problem with conserving  
potassium or people on diuretics often receive  
potassium.

21

22

23

Q. What form does that medication

24

25







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take? Is it in ampule or ---

3

4

A. There are many oral preparations  
and then there are, I think, a number of ampules, as  
you say, or intravenous preparations.

5

6

Q. Would they be ampules of  
the type that I showed you earlier?

7

8

9

10

A. I am just trying to think.  
I cannot recollect. My impression is not, but I am  
not 100 per cent sure. I don't think potassium comes  
in vials like that.

11

12

Q. What kind of ampules do you  
think ---

13

14

A. The one that comes to my mind  
is approximately 10 ml size of what is called  
concentrated KCl, Potassium Chloride.

15

16

17

18

19

Q. Is it in a clear glass vial?

A. Yes, with a coloured label  
is the one that we use in the Hospital. I can't  
remember the colour. I think it may be yellow or  
something but ---

20

21

Q. You are referring to a label  
as opposed to the writing that we find on the ampules  
of digoxin?

22

23

24

25

A. Yes, it seems to be a more easy  
to read label, on a coloured background type of thing.





1

2

Q. A piece of paper affixed

3

then?

4

A. Not the paper - I don't know

5

how the process is.

6

Q. Some kind of material affixed

7

to the ---

8

A. Yes, it seems to be embedded

9

in the plastic, or whatever.

10

Q. Is potassium something that

is used to treat patients with heart conditions?

11

A. Potassium is commonly used

12

in patients with heart conditions because patients

13

with heart conditions often are on diuretics which

14

one of their unfortunate side effects is that they

15

cause people to lose potassium. That is the commonest

16

Q. Would you expect to find

17

potassium on Wards 4A and 4B?

18

A. Yes.

19

Q. Would you expect to find it

20

locked up in the medication room or easily accessible?

21

A. Locked up, now we are talking

22

about - I thought that I had clarified that earlier.

23

As far as I was aware the only drugs that were locked

24

up prior to that time was just the drugs that were

25





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under the Dangerous Drug Act.

3

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5

Q. Would you expect to find potassium on the crash carts in 4A and 4B, and I am talking about the period under review?

6

7

A. No, I would not expect to find it on the crash cart.

8

9

Q. Do you recall seeing any on the 4A and 4B crash carts the night you went around to collect the digoxin?

10

11

12

13

A. No.

14

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19

Q. Is there a particular brand name of potassium that was used on 4A and 4B at that time?

A. I could recognize the bottle probably but I could not remember - I can describe it to you a little better, really. It was a 10 ml vial and had, as I said, a coloured label and it was I think yellow, and I can't really tell you any more than that. If you show me one, I would probably recognize it but ---

20

21

22

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25

Q. One other question on potassium, can an overdose of potassium cause death?

A. Yes.

Q. You indicated that when Baby Pacsai was in the ICU you prescribed a treatment that





1  
2 was designed to lower the potassium level, is that  
3 correct?

4 A. Yes.

5 Q. My notes indicate that you told  
6 Mr. Lamek that the medication designed to lower the  
7 potassium may have aggravated the digoxin.

8 THE COMMISSIONER: There was concern  
9 at the time - is that what you are saying?

10 THE WITNESS: Or concern a little  
11 later maybe, more than at the time.

12 MS. FORSTER: Q. Can you tell me  
13 what you meant by that statement?

14 A. It is a little bit to do with --  
15 I am not an expert on the pharmacology of this, but  
16 it is my understanding at the present time and at  
17 that time, which may have been even better than it  
18 is now, but the situation was if you had a low  
19 potassium you were in a situation of aggravating  
20 digoxin toxicity. That is probably the commonest  
21 situation, if you had a patient with digoxin toxicity,  
22 you check the electrolytes in case they have low  
23 potassium whereas the opposite effect of the high  
24 potassium may protect against the effects of digoxin.  
25 In fact, some of the treatments advocated for digoxin  
toxicity would be to elevate the serum potassium level.







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Q. Just as an example, if we had a child who had a antemortem level of 2.5 nanograms --

A. Yes.

Q. A child with a normal potassium level would be less likely to show toxic effects as a result of the digoxin than a child with a low potassium level, the same child?

A. Yes, I think that is correct.

THE COMMISSIONER: I'm not sure that that is so because you start off with the assumption that there is this digoxin level.

MS. FORSTER: That is right.

THE COMMISSIONER: As I understand it, it is the high potassium that reduces the digoxin level, is it not?

THE WITNESS: No, it does not appear to have an effect on the level. It appears to be a physiological counter mechanism.

THE COMMISSIONER: So it has only a clinical effect?

THE WITNESS: Clinical effect, yes, that is my understanding.

THE COMMISSIONER: I am sorry, you were right.

Q. Just to clarify that a bit more,





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2

if you lower the potassium level you are not going to, at the same time, increase the digoxin level?

3

4

A. No.

5

6

7

Q. It is simply the lower the potassium level the more prone you are to exhibit toxic effects as a result of a given dose of digoxin. Is that fair?

8

9

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11

12

13

A. That is the dynamics in a situation that we are usually used to, but in sort of relatively mild levels of digoxin.

Q. You also indicated to Mr. Lamek that you had never had contact with a digoxin level of 26 before?

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A. Yes.

Q. That I take it was the post-mortem level in Baby Pacsai?

A. Yes.

Q. Had you ever had occasion before this to order a postmortem level to be taken of digoxin?

A. No, I did not order that particular one but I had not occasion to ask for a post mortem.

Q. Had you ever before Baby Pacsai had any contact with postmortem digoxin levels?





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A. No, I guess I assumed because other things had to be measured post mortem that it also could be measured post mortem, just going from my knowledge of radioimmunoassays and things.

Q. But you never heard of a postmortem digoxin level before Pacsai?

A. I can't recall hearing of it.

MS. FORSTER: Thank you very much.

THE COMMISSIONER: Miss Symes, I guess you are next.

MS. SYMES: I think Mr. Hunt is before me.

THE COMMISSIONER: Sorry about that.

CROSS-EXAMINATION BY MR. HUNT:

Q. Doctor, my name is Hunt. I represent a number of interests here, including the Attorney General and the Coroner's.

Is it fair to say, sir, that in respect of Baby Pacsai once you became concerned about digoxin toxicity that you were simply not prepared to just dismiss that as having played some role in his death?

A. I think you are missing out the dynamics of what happened. I think really, myself, looking back at the events that said, you know,





1  
2 what about digoxin, and that is why I went back looking  
3 for the digoxin.

4 Q. And this process started in  
5 you at the point in time of death and looking back  
6 at the terminal events and your involvement in them?

7 A. Yes, our working diagnosis  
8 during the arrest or at the time of the arrest was  
9 that we were dealing with hyperkalemia - arrhythmias  
associated with hyperkalemia.

10 Q. So far as the digoxin toxicity  
11 question is concerned, you were prepared to track  
12 that down until you got a satisfactory answer?

13 A. Well, yes, that is maybe not  
14 unusual for me.

15 Q. My question was, was that as  
16 a result of your enquiring nature or is that an  
17 indication of the measure of concern that you had  
about the digoxin toxicity question?

18 A. It is very hard for me to judge  
19 that question about myself. I don't know.

20 Q. But notwithstanding that you  
21 knew the Coroner had been called in, you still took  
22 a number of steps on your own to enquire into the  
question of digoxin toxicity?

23 A. Yes, for my own interests.  
24  
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Q. One of them was to go to Dr. Fowler and report to him your experience in terms of the events and as well the information that you got from the testing that was done?

A. Yes, that was on the Tuesday.

Q. That was late on the Tuesday.

On the Wednesday you indicated you sought out Dr. Carver after the grand rounds to speak to him about it?

A. Yes.

Q. He is the chief of Paediatrics?

A. Yes.

Q. And once you had spoken to

Dr. Fowler on the Tuesday, was there some concern that you still had that the matter be enquired into at a higher level? Is that why you sought out Dr. Carver on the Wednesday?

A. It is hard for me to know why I sought out Dr. Carver because, to my recollection, nothing happened between the time that I spoke to Dr. Fowler and the next morning, and it may have been just that I felt it was the right thing to do. I am not sure why I sought him out the next morning, first thing.

Q. You were looking for some





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answers and nothing had happened between Tuesday afternoon and some time on Wednesday when you spoke to Dr. Carver?

A. Yes, I guess I was curious. I got the impression from Dr. Fowler that he knew more than me, I guess, and I presume maybe I was also interested to know, with Dr. Carver, know a bit more - it was maybe a combination of inquisitiveness and reporting.

Q. Correct me if I am wrong, but in effect it seems to me by going to Dr. Carver, the Chief of Paediatrics, really you were sort of bypassing the normal route and going above Dr. Fowler or the other cardiologists to report your concern?

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A. No, it wasn't unusual for me to intervene in situations where there was a bit of a conflict of interest maybe between two services. You know, I mean, it was part of my role in a way if there was a bit of a problem say between - about patient management, or about some problem on the ward. Dr. Carver was always available to talk to about situations like this.

Q. And the conflict of interest it may, you may have perceived, did it have to do with the fact that the case in question, that is Pacsai, was a cardiology patient and the question involved the possible administration of drugs?

A. I guess my use of the words "conflict of interest" was more maybe in relation to other situations where I had gone to Professor Carver. I still haven't got the exact explanation as to why I went to Professor Carver that Wednesday morning. I guess it was just a natural thing to do, I don't know.

Q. Was it natural because you had heard nothing back from Dr. Fowler?

A. I really don't know what motivated me, I think it was probably many things.

Q. And did I get your evidence





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correctly that once you spoke to Dr. Fowler on the  
18th about it you never were contacted by him again  
concerning it?

5

A. Yes, that is my recollection.

6

I certainly didn't have any formal sitdown chat with  
him about it.

7

8

Q. Nor by any other cardiologist.

9

A. Yes, the same applies to the  
other cardiologists.

10

11

12

13

Q. Now, you indicated to  
Mr. Lamek that as of the end of March it was your  
opinion that Baby Pacsai died of digoxin toxicity  
and you still hold that opinion today?

14

A. Yes.

15

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Q. In reviewing the events of  
that week you indicated that by the Monday when you  
came back after that weekend of the 21st-22nd and  
you heard the results of the analysis of the blood  
levels of digoxin of Baby Cook, it is at that point  
in time your concern was more than just heightened,  
you were beginning to consider, or were considering  
intentional overdose in the cases of Pacsai, Miller  
and Cook.

23

A. I'm sorry, I am losing you

24

a little bit. I am not quite sure what you are saying.

25







BB3

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Q. Well, ---

3

A. I know you are saying ---

4

Q. Well, by the Monday you were,

5

as a result of your involvement in the week before,

6

you were considering intentional overdose?

7

A. Yes, it was one of the things

8

I was considering, yes.

9

Q. And you had not been in the

Hospital, you don't recall, on the Sunday?

10

A. No, I think I was probably

11

in telephone communication with the COC chief

12

resident on call that day, but I really don't

13

remember coming in on Sunday.

14

Q. You had not been contacted by

any police up to the Monday?

15

A. I don't remember being

16

contacted by the police.

17

Q. And you were not involved in

18

any of the meetings with the coroners that may have

19

taken place, the meeting on the Saturday?

20

A. No, and the coroner came in

21

on the page Saturday evening that was really just

22

when I left to do the inventory.

23

Q. So you were not there for any

discussion on the Saturday evening?

24

25





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A. Not with the coroner, no.

3

Q. So basically, can I take it

4

that your feelings as of the Monday resulted from

5

your own efforts to enquire into the question of

6

digoxin toxicity during the preceding week, and

7

the opinion that you had gained concerning the levels

8

in Miller and Cook?

9

A. Yes.

10

Q. You in effect were involved  
in a process of getting information for yourself?

11

A. Well, I mean the information

12

that I got for myself I made available to other

13

people. And, you know, the information that I got

14

was freely available.

15

Q. I am not suggesting it was

16

restricted to you. You were involved in getting  
information.

17

A. Well, the only piece of

18

information that I actively sought out was the

19

piece of information about the digoxin and that was

20

on Pacsai.

21

Q. And you made suggestions with

22

respect to Baby Miller and the obtaining of a level  
there?

23

A. Yes.

24

25





1  
2 Q. And then you obtained informa-  
3 tion, whether you sorted it out or not, about Baby Cook  
4 on the Monday?

5 A. Yes.

6 Q. In other words, what I am  
7 suggesting is, you were starting to put your own  
8 experience and the information that you had together  
9 by the Monday in forming your own conclusions?

10 A. I guess so, yes.

11 Q. The reason I am asking you is  
12 we had a suggestion put yesterday by one of the  
13 lawyers, Mr. Scott to Dr. Cutz, about an atmosphere  
14 that was prevailing in the Hospital as a result of  
15 the police appearance on the scene that may have been  
16 causing people to form opinions just because they  
17 were there. What I am suggesting is that your  
18 conclusions and opinions that you held as of the  
19 Monday were things that you had arrived at as a  
20 result of your own experience and not through the  
input of anybody else from the police or the coroner's  
office to you?

21 A. I think that is fair, yes.

22 MR. HUNT: Thank you. Those are  
23 all the questions I have.

24 THE COMMISSIONER: Thank you.  
25





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MR. YOUNG: Mr. Commissioner.

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THE COMMISSIONER: Yes, Mr. Young.

4

MR. YOUNG: I apologize for the

5

confusion this might have caused, but in view of

6

Dr. Costigan's very comprehensive evidence I have had

7

an opportunity to speak with Mr. Percival over the

8

lunch hour. I have a few questions to ask

9

Dr. Costigan, I don't expect to be more than about

10

10 minutes, and indeed Mr. Percival will not be

11

attending tomorrow to cross-examine.

12

THE COMMISSIONER: That is fine. You

13

are just coming in at the right time, so you will not

be putting anybody out.

14

MR. YOUNG: That is why I rose when

15

I did.

16

CROSS-EXAMINATION BY MR. YOUNG:

17

Q. Dr. Costigan, my name is

18

David Young and I am here representing the Metropolitan

Toronto Police.

19

Doctor, you told us earlier this

20

morning that on the Saturday evening you talked to

21

Drs., and correct me if I am wrong, Carver, Fowler,

22

and I believe there was a nursing supervisor present

23

as well, and the discussion included a talk about

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one team of nurses being connected with three

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particular deaths, is that correct?

A. Well, no. My recollection was that we had only information about two.

Q. Two deaths?

A. Pacsai and Miller.

Q. Had you considered this relationship at an earlier time, the relationship for this one team to more than one death?

A. As I mentioned previously I had one evening, or one night or something after the cardiac arrest, I am not sure what stage of the whole time it was, I had consulted some nurses who were crying and they happened to belong to that same team, and the reason they were upset was they had been involved in one or two, or three other arrests, I am not sure at that time.

Q. Doctor, do you recall what was the name of the child who had passed away just prior to you observing these nurses?

A. No.

Q. You don't?

A. No.

Q. I think you told us earlier you were not sure of what date it was. Can you help me with the time period, are we talking in





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early 1981, do you know if it was March of that year?

A. My impression is it was later than earlier, like it was I think closer to the end but I really couldn't be sure.

Q. Doctor, do you have any idea who these nurses were, do you know what team they were from, let's start with that?

A. I don't know how you identify the team, they don't have a name or whatever.

Q. Who was the team leader?

A. I am not even sure of that, but I think it was the team with Susan Nelles and Phyllis Trayner, and I knew other faces but I didn't know other names.

Q. Thank you, Doctor. You also told us this morning that at one point or another you made a list of six children and I believe you were involved in the resuscitation of each of these children? The list included Monteith, Velasquez, Lutes, Belanger, Hines and Pacsai. Is that correct, is that the criteria for a child getting on that list?

A. It was actually a list that arose out of the police questioning of me and I received a typed up version of my answers under the dubious heading of "anticipated evidence". So on





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review of that list last night, I noted that of that list one of them had a note by me at the bottom saying that this death was unexpected. So I reviewed the chart this morning and this is Belanger.

6

Q. Yes, I understand.

7

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A. That note is not reflected in my note at the resuscitation, so it obviously arose from my reviewing of the chart at the time that the police asked the questions. So I didn't really review the chart now to form the same opinion or to comment on that opinion, do you understand?

12

13

Q. I think I do, yes. I understand enough not to pursue it any more.

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Doctor, just one more question. Mr. Hunt has just reviewed a thought process that you underwent on the Monday morning and at that time you considered the fact that you knew, I guess at that time, of four children who had died as a result of, well I will not say as a result, you knew of four children who had died and you knew that each of these children had rather high digoxin levels either post mortem or ante mortem, is that correct?

22

A. Yes.

23

24

25

Q. Would it be correct to say that you had never witnessed levels of that magnitude





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prior to learning of any of these four children?

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A. That is correct, I had not

4

seen levels of 25 or ---

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Q. When you speak of an intentional

6

overdose, Doctor, we are really talking about murder,

7

aren't we?

8

A. Well, I don't know your

9

definition of murder.

10

THE COMMISSIONER: It is not easy,

11

Doctor, I have struggled with it many times. We are

12

talking about an intentional killing, is that what  
you mean?

13

MR. YOUNG: That would be my

14

definition, Mr. Commissioner.

15

THE WITNESS: So your question really

16

was?

17

MR. YOUNG: Q. Did you, well, will

18

you accept the definition of an intentional killing?

19

A. Yes.

20

Q. As being that of murder?

21

A. Yes.

22

Q. Is that what you were thinking

23

of on that Monday morning?

24

A. Among other things, yes, but

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I was thinking of that, yes.







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Q. Doctor, I lied earlier, I said I had one more question but I actually have one additional one. During the course of your enquiries and thinking about this on Monday morning, or indeed at any earlier time, did you ever have occasion to look into who the nurse was that was looking after Baby Pacsai?

A. I know the nurse that accompanied the baby to the Intensive Care Unit with me.

Q. And her name was?

A. Was Nurse Nelles.

Q. Did you ever have an opportunity of looking into who was administering care, what nurse was looking after Baby Miller?

A. I'm sorry, Baby Miller?

Q. Yes.

A. Just a second, no, I did not.

Q. How about Baby Cook, who was looking after Baby Cook just prior to his death?

A. Well, what I know was that when I had visited the ward earlier that evening Nurse Nelles was holding the Baby and we had spoken about the intravenous so I assumed that she was certainly doing it at that time.

MR. YOUNG: Thank you, Doctor.





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THE COMMISSIONER: Now, Miss Symes.

CROSS-EXAMINATION BY MS. SYMES:

Q. Dr. Costigan, my name is Beth Symes and I represent the Registered Nurses' Association of Ontario and a number of nurses who were on 4A/4B during the epidemic period.

A. Yes.

Q. Now, I believe in answer to Mr. Lamek this morning you said that during the epidemic period you did not choose cardiology as one of your elective rotations.

A. During the year that I worked as chief resident I did not choose to work in cardiology, I had previously worked on that very ward the year before for a month as an elective.

Q. That would have been when it was on the 5th floor?

A. Let me think, you will have to clarify - I think it was on the 5th floor at that time, yes.

Q. Now, aside from working on the 5th floor in your rotation as a resident, would you have been regularly seen on 4A/4B during the period from July '80 to March '81?

A. Yes. I have the impression





BB13

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3 that I was there practically every day because this  
4 system was that we had what was called chief  
5 resident rounds. What that really meant was that  
6 we had, myself and the associate chief resident who  
7 was on call for the night and any of the other  
8 associate residents were available. And a few  
9 interested residents if they were available. We  
10 would go around and we would discuss any potential  
11 problems, any interesting patients, sick patients,  
12 in a form of a teaching round and also an acquisition  
13 about the possible problems during the night and that  
14 was what we did every day.

13 Q. By March of 1981 then, I  
14 gather you would be aware then that in fact there  
15 were two separate Wards 4A and 4B?

16 A. Yes.

17 Q. And would you be aware that  
18 there were two different head nurses?

19 A. Yes.

20 Q. And were you aware then that  
21 on the night, for example March 21st, that there  
22 were two separate team leaders?

23 A. Yes.

24 Q. And were you also aware that  
25 on any given day, or night, that is a 12 hour day





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shift or a 12 hour night shift, that there were two nursing teams, one assigned to each ward?

A. Yes.

Q. And you had told us that on Saturday, March the 21st in fact you were not scheduled for duty that day, but had driven your wife to work and stayed at the Hospital for Sick Children in order to write, is that correct?

A. Well, yes, I forget exactly what I was doing, but I was doing a bit of reading or writing or something, I'm not sure what I was doing.

Q. Can you recall what called you to Ward 4A at about 1800 hours on Saturday night?

A. No, I can't. I tried to remember but I can't remember.

Q. Who was the associate chief resident who was in fact on duty?

A. Dr. Mounstephen.

Q. Dr. Mounstephen?

A. Yes.

Q. Was he on both day and night for the 21st?

A. The situation was that we started at 9:00 to 9:00, 9:00 in the morning until







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9:00 the next morning on the weekend.

Q. So Dr. Mounstephen started at 9:00 a.m. on Saturday the 21st and he would have been relieved from duty 9:00 a.m. on Sunday the 22nd?

A. Yes.

Q. Do you remember where you were when you got the call about Justin Cook at around 1800 hours?

A. The call?

THE COMMISSIONER: I am sorry ---

THE WITNESS: What call?

MS. SYMES: Q. How you got notified, I am sorry.

A. Oh, I can't remember, I got a phone call I think from Dr. Carver.

Q. I am sorry, I am trying to take you to Saturday the 21st.

THE COMMISSIONER: Saturday was - oh, you mean ---

MS. SYMES: Q. At 1800 hours.

A. Yes.

Q. You say you are not sure how you came to the floor?

A. Yes.

Q. Do you recall where you were





BB16

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when you learned that something was wrong with Cook?

3

A. I'm sorry, I am not following

4

you for a second. I didn't go to the ward because

5

there was something wrong with Cook.

6

Q. Okay, why did you go to the

7

ward?

8

A. That is what I told you

9

earlier, I can't remember why I went to the ward.

9

Q. You didn't have any particular

10

duties on the ward?

11

A. No.

12

Q. Was your associate chief

13

resident present?

14

A. No, I think not, it was being

15

handled by the cardiac resident and the cardiac

16

Fellow quite well.

17

Q. Do you know what time you

18

arrived on the floor?

19

A. My only judgment of that

20

and that is the time that child had a spell, which  
Doctor - which Mr. Lamek said was about 6 o'clock.

21

Q. The patient chart for Baby

22

Cook, do you have the chart in front of you?

23

A. No, no.

24

Q. I believe, Mr. Registrar, that

25





1

2

3B17

is 116.

3

A. Thank you.

4

Q. And it is on page 25.

5

A. Yes.

6

Q. Is that a note that you were

7

then referring to to help place in time when you  
would have been on Ward 4A, 4B?

8

A. I would just like to check

9

whether it is on any other episodes, that sounds very  
like the actual sequence of events, because the  
child was blue and the murmur had disappeared. They  
gave propranolol and the murmur returned and the  
child picked up, so it is a very similar sort of  
sequence to that.

10

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Q. Now what stage of the events  
of the note on page 25 did you actually arrive and  
see?

16

17

A. My recollection was they were  
just about giving the propranolol or had just given  
it, just about that time.

18

19

20

Q. Who was present?

21

A. I remember Dr. Jedeikin.

22

Q. He was the cardiac Fellow?

23

A. That is correct.

24

25

-----





/BB/ko

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Q. Who else was there?

3

4

A. There was a cardiac resident, you know, a resident on the cardiology ward for that month.

5

6

Q. That was Dr. Kantak?

7

A. I can't be sure.

8

Q. How many nurses were there, do you recollect?

9

A. No, I can't, I don't recollect.

10

11

Q. Were there a number of nurses, that is, at least three?

12

A. My impression was that there were less than that.

13

14

Q. And when you came in to the room you said that you saw these people and what do you think that you first saw?

15

16

A. I guess I saw a little bit of activity. It is difficult to know what I saw first, so, I just went over to see what was going on. I asked I guess and somebody explained what was happening.

17

18

Q. Did they explain that the baby had had a blue spell?

19

20

A. Yes, yes.

21

22

Q. Did they explain that the baby

23

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CC 2

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had been given propranolol by mouth, that is, orally  
and that that had not had the desired effect?

3

4

A. No, I don't remember that being  
told to me, no.

5

6

Q. Did you understand that there  
had been no propranolol on the ward and in fact the  
nurse had to go to 7G to borrow propranolol?

7

8

A. I wasn't aware of that. Was it  
oral propranolol that she had to go and borrow?

9

10

Q. What kind of propranolol did you  
see being given?

11

12

A. It was the intravenous  
propranolol I saw being given.

13

14

Q. And do you know who gave the  
intravenous propranolol?

15

16

A. It is very difficult to remember  
precisely but my impression was that it was Dr.  
Jedeikin who gave it.

17

18

Q. And while you were in the room,  
do you remember a period of time where there was some  
confusion as to where was the propranolol to give IV?

19

20

21

A. I wasn't aware of that. Maybe  
I arrived too late or something but I wasn't aware of  
that.

22

23

Q. Now, once the child have been

24

25





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given the IV propranolol what effect was observed in  
the child?

3

4

A. I guess the anticipated result  
was that the child's murmur returned. I think  
Dr. Jedeikin was listening and after giving the  
injection he listened to the heart and it meant that  
the shunt had opened up again and the child had become  
pink again, the child improved.

5

6

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Q. Did you see where Dr. Jedeikin  
got the propranolol from?

11

12

A. No. My impression was, when I  
arrived, like, when he just about when he had it --

13

14

Q. In his hand?  
A. -- in the intravenous tubing.  
Maybe he had even given it by the time I arrived.

15

16

Q. Did you see a crash cart that  
had been brought into the room?

17

18

19

20

A. I don't recall.

21

No.

22

23

24

25

Q. After the propranolol had been  
given, do you remember any discussion about the fact





1

2

that this baby was still very ill?

3

4

5

A. My impression was that they were very pleased, Dr. Jedeikin was very pleased with the response and that the baby had come around very nicely.

6

7

8

Q. Given that the baby had come around very nicely, was there still a real and ongoing concern that this was not a stable healthy baby and that these blue spells or blue spell might recur?

9

10

11

12

13

A. Well, it is not unusual for babies with this condition to get spells and they can have very many frequent spells and the treatment is basically similar to what had just been given or, you know, in a similar vein. So, that of itself is not terribly unusual.

14

15

16

Q. So, for example, although by 1820 on page 25 Baby Cook had responded and the murmur had been heard again?

17

18

19

A. Yes.

20

21

22

23

24

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Q. Indicating good effect from propanolol?

A. Yes.

Q. It would not have been totally unexpected or even surprising that another blue spell in fact occurred in the early hours of the morning?

A. Sure, it could have occurred -





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now, I don't know the case very well but knowing the condition that the child had, that the child could have had another spell, yes. The propranolol was not a cure, it was more a symptomatic treatment for an acute episode.

Q. While you were in the room, did you hear an order for either constant care or close supervision of the child?

A. It rings a bell but I really can't say, you know, I heard that being issued as an order.

Q. On page 25, it is number 3 of Dr. Jedeikin's notes, strict supervision of child. Do you remember that being said orally?

A. Just as I said a moment ago, I got the impression all right when you mentioned it that this had come out but I really can't remember specifically.

Q. Do you remember any discussion that a blue spell might occur again?

A. No.

Q. Did you see anyone draw up another drug in a syringe and tape it to the end of a bed?

A. No.







1

2

A. No.

3

Q. To the best of your recollection,

4

would you have seen it if it had occurred while you  
were in the room?

5

6

A. It depends. At that time I did

7

not stay very long. In fact, once the baby perked up  
and was looking pink again I left and I'm not sure when

8

they organized another syringe as you suggest, but I

9

didn't see another syringe being taped to the bed.

10

Q. Okay. We understand that in fact

11

another syringe was drawn up and taped to the end of

12

the bed. Is that normal medical practice?

13

A. I mean, I can't comment I guess

14

on what is normal medical practice from the cardiac's  
point of view. I don't know who ordered that or

15

whatever. I would imagine it was probably Dr. Jedeikin

16

to have the medication at hand if there was difficulty

17

getting the medication in the first place. That I can

18

see as a logical reason for doing such a thing. It is

19

not a thing that is done commonly. You know, it is

20

usually the medication is out in the corridor or,

21

wherever, in the medication room or wherever, you know.

22

Q. And if that was done, is that

23

consistent then with a real continuing concern for the

24

health of this child?

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CC 6





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A. I think it is consistent with Dr. Jedeikin's impression of the environment at the time. Maybe he was just doing it to make a point or something about the availability of medication. I don't know why he did it. I mean, you should ask him really. So, what can I say.

Q. At the end though when you left the room, as far as you understood the baby had perked up?

A. Yes, was pink.

THE COMMISSIONER: Everybody is against me, yes.

MS. SYMES: Pardon?

THE COMMISSIONER: I say everybody is against me. You are going to force us to call Dr. Jedeikin.

MS. SYMES: Sorry.

THE COMMISSIONER: Maybe we could write him a letter.

MS. SYMES: I think there are a number of people who might like to cross-examine Dr. Jedeikin.

THE COMMISSIONER: Well, that's exactly why I don't want to call him. But I will concede those answers if you want them that it does represent a concern about the continuing nature of the baby,





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otherwise, they wouldn't have done that, if in fact  
that is what they did.

3

4

MS. SYMES: Q. But as far as you can  
remember you were there just for a short period of  
time?

5

6

A. Yes.

7

8

Q. And you think you entered the  
room at the time that the propranolol either was about  
to be given or had been given by Dr. Jedeikin?

9

10

A. I think it was either being  
given or had just been given.

11

12

Q. And you left shortly thereafter?

13

A. Yes.

14

15

Q. Okay. Now, when medications are  
drawn during an arrest situation we understand and we  
have had other evidence that the nurse may draw up the  
medication from the vial into the syringe.

16

17

A. Yes.

18

19

Q. And when she hands the syringe  
to the doctor he checks the vial to make sure that he  
is in fact administering the correct medication?

20

21

A. Yes. Often the vial is attached  
to the syringe or whatever.

22

23

Q. Can you tell me the difference  
between an inderol or propranolol vial and a digoxin

24

25





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CC 9

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vial?

3

A. I mean, it has got a different  
name on them.

4

5

Q. Other than the name which I  
believe Ms. Forster illustrated for you was fairly  
difficult to read?

6

7

A. Yes.

8

9

Q. Is there any difference between  
them?

10

A. You are asking me to recollect.

11

I really can't comment. I have seen naloxone vial now,  
I haven't seen a propranolol vial for a long time, so,  
I don't really know.

12

13

14

Q. Now, when you went to the meeting  
on the night of March 21st you knew that there was an  
ill patient on that ward 4A, that is, patient Cook for  
whom Dr. Jedeikin had ordered strict supervision of  
the child. Is that true?

15

16

17

18

A. Yes. I wasn't aware of his order  
of strict supervision.

19

20

Q. But you were aware that there  
were concerns about the child?

21

22

A. As I left the things seemed to  
be reasonably - I wasn't aware that there was a  
continuing concern when I left.

23

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CC 10

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Q. So, you were not aware of any special problems then that the nurses on 4A or 4B would have that evening?

A. Oh, I didn't realize that there was any special concern about that special baby.

Q. What time did that meeting start on March 21st?

A. You may be able to find out better from other sources. My impression was that it was about 8 o'clock but I could be wrong.

Q. And what time did it end?

A. About 10:30 I think. It may not even have gone on that long.

THE COMMISSIONER: That's when it ended for you?

MS. SYMES: Q. Yes.

A. Yes, that's when Dr. Tepperman came in.

Q. I meant specifically for you.

A. Yes.

Q. That's when you went off to do your routine?

A. That point sticks in my mind, yes.

Q. Was anything reduced to writing





1  
2 with respect to the meeting and the change of the  
3 handling of digoxin?

4 A. Yes. Well, writing. Dr. Carver  
5 dictated like a minutes or an order or whatever. He  
6 just dictated what had happened, the meeting went  
7 ahead, what was discussed at the meeting, the  
8 recommendations that were made by the little group or  
9 whatever and what we were going to do about implementing  
10 what we had discussed at the meeting.

11 Q. I think we found out from Dr.  
12 Carver that that would not have been typed until  
13 Monday. So, I am asking you at the end of the meeting  
14 did you have anything in writing with respect to what  
15 the changes were to be with respect to the admini-  
16 stration of digoxin?

17 A. Not in writing, no.

18 Q. So, when you were to go and  
19 visit each and every ward in the hospital your  
20 instructions were purely oral instructions?

21 A. Yes, but I was well known and  
22 I used the fact that it was coming from Dr. Carver  
23 and, you know, I felt I had no resistance at all to  
24 the carrying out of the order.

25 Q. But would you agree with me if  
there was any confusion about what your orders were,





CC 12

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that is, the procedure to be followed, that there was nothing in writing to refer to?

3

4

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A. There was no confusion in my mind as to what was to be requested from the nurses. I explained to them as best I could about what they should do.

8

9

10

Q. But do you agree with me still that if a nurse on the floor wanted to check the major change in digoxin orders she would have nothing to look at?

11

12

A. Yes, she would be relying on the team leader having spoken to me verbally, yes.

13

14

15

Q. Now, out of the meeting then you and Dr. Mounstephen who had not been present at the meeting were to go to each of the wards on each of the floors, is that correct?

16

17

18

A. Yes.

19

20

Q. I gather you were to speak to each of the team leaders?

21

22

A. Yes, or the acting team leaders if the team leader was away.

Q. And I gather that you were to communicate to them (a) that digoxin was to be locked up?

23

24

25

A. Yes.





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Q. And (b) that digoxin was to be treated as a narcotic, that is, two signatures before it could be given?

A. Yes, two signatures, yes.

Q. And the third thing was that you were to do a count or inventory of the digoxin?

A. Yes.

Q. Was there anything else that was to be communicated or that was communicated?

A. I don't remember anything that I was to communicate. We communicated just the minimum really as regards was necessary, that I considered necessary for them to do what I asked. Like, I mentioned that we were having a problem and that Dr. Carver had agreed that we should lock up this and, you know, that was the sort of approach that we took.

Q. Now, what was to be the role or responsibility of the nursing supervisor in affecting this change? What were her duties to be?

A. I can't remember what her duties were to be. I know there was something for her to do, I'm sure, but I can't remember what they were.

Q. And I gather then that you started at the top floor of the hospital and you worked your way down, is that correct?







CC 14

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A. That's my recollection. I am not a hundred percent sure but I think that's the way we did it.

Q. And what time would you have finished the process, that is, reached the last ward?

A. It took considerably longer than we had anticipated. What I wrote on this little inventory is between 10:30 and 12:30. So, that is as accurate as I have on this point of time, you know.

Q. Now, when you went towards 4A/4B I gather it has a common nursing station?

A. Yes, a central nursing station.

Q. You mentioned speaking to, I believe it was Nurse Trayner, the team leader?

A. I didn't really know her name at that time but I knew her face and subsequently I learned her name.

Q. Did you also speak to the other team leader?

A. Yes. I cannot remember who it was who was on that night because I guess I didn't know her.

Q. Did you personally see the digoxin locked in the narcotic cupboard on 4A?

A. Which is 4A?





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CC 15

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Q. The side with 418 on it.

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Q. Did you also personally see the locking up of the digoxin on 4B?

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A. Yes. I went over and did the same with the team leader on that side. I think the nursing supervisor might have been even present for 4B. I can't remember but I get that impression that she was there for that.

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Q. The reason I ask you that, Dr. Costigan, is that one of my clients who was the night supervisor, it is her evidence, or will be her evidence, that when she went to the floor at about 12:30 that night the digoxin had not yet been locked up.

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A. Yes.

Q. Now, are you sure that you personally saw it locked?





CC 16

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MR. LAMEK: He never said he saw it  
locked.

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THE WITNESS: No, I never said I saw  
it locked. What I said was, as I said, I went over  
and counted the medications and took them from their  
usual spot and left them on the desk on the side 4A.  
What I remember is the DDA cupboard being open or  
whatever, I don't remember actually seeing them being  
put in and locked.

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MS. SYMES: Q. Did you give anyone  
instructions that they were to go into each room and  
see if there were any digoxin vials anywhere in  
patient rooms and that they should be locked up?

14

15

16

A. As far as I am aware at the time  
and now it is not to have it to keep digoxin in the  
rooms in vials. So, I didn't, to answer your question,  
I did not.

17

18

Q. Did you personally look for any  
digoxin other than in the medication cupboard?

19

A. And the crash cart.

20

Q. I am sorry. There wasn't on  
the crash cart.

21

22

A. Yes, but I looked.

23

Q. Yes, you looked on the crash  
cart and there was none.

24

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CC 17

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A. Yes.

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Q. Did you at any time look to see  
if there was digoxin in any of the rooms?

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A. No.

6

Q. All right. And was the oral  
digoxin, that is, the elixir locked as well?

7

8

A. Yes. My recollection was that  
all digoxin was - let me think for a second. It is  
hard to recall. No, I think my impression was that  
it was just the intravenous preparations were locked  
up. I can't remember that point.

10

11

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Q. Just the ampules portion?

13

A. Yes, I think it was only the  
ampule portions that were locked away.

14

15

Q. Not the oral form?

16

A. Not the oral form.

17

Q. I gather you have said that it

18

was in fact a mammoth task to visit all wards and speak  
to all team leaders?

19

A. No, the reason it took such a  
time was really the nurses were busy doing other things  
and you had to talk to the team leader. You know, it  
took a little bit of time to explain and sort of ensure  
that things were done and move on to the next ward.

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Q. But I gather you did it as

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CC 18

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carefully as possible that night?

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A. Yes.

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Q. And Dr. Carver has given

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evidence that in fact you missed some and that on  
Sunday, March 22nd, Peggy Rappaport from the pharmacy  
prepared Exhibit 185 which was her inventory and found  
that you had missed digoxin in a number of places.

8

Does that surprise you?

9

A. I don't know what places she

10

found digoxin in.

11

Q. It is very difficult to understand

12

Exhibit 185 but I gathered that Dr. Carver's conclusion  
is that there was some that you and Dr. Mounstephen  
missed.

13

14

A. Yes. Well, I mean, the reason

15

I would be surprised if it was in a place that I had  
already looked.

16

17

Q. But it is obvious then that if

18

she found some that there was digoxin in places,

19

perhaps unexpected places?

20

A. Perhaps they were in places that

21

we did not look.

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MR. LAMEK: Why you don't you show her

the exhibit rather than guess.

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THE COMMISSIONER: I'm not sure that

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Dr. Carver put it exactly that way. He did say that she found some additional digoxin but I don't think he said that Dr. Costigan missed it. He may have.

MS. SYMES: Yes, he did.

THE COMMISSIONER: Did he say it in that indelicate way?

MS. SYMES: Yes, that it was missed. He said it was a mammoth task and he wasn't surprised.

THE COMMISSIONER: Oh.

MS. SYMES: Exhibit 185 is the inventory conducted on March 22nd, Sunday, by Peggy Rappaport.

THE COMMISSIONER: Yes, all right.

MR. HUNT: What is the page reference to the evidence?

MS. SYMES: I don't know. Could he be shown Exhibit 185, please?

THE COMMISSIONER: At some point if we want to take the afternoon break.

MS. SYMES: Certainly, perhaps now in case he hasn't - have you ever seen Exhibit 185?

THE WITNESS: No.

THE COMMISSIONER: All right.

MS. SYMES: Perhaps I could ask you about it after the break.





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TORONTO, ONTARIO

Costigan, cr.ex.  
(Symes)

195

CC 20

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THE COMMISSIONER: Well, we will take

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15 minutes.

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--- Short recess

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--- on resuming.

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THE COMMISSIONER: Yes, Miss

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Symes.

5

MS. SYMES: Yes, Mr. Commissioner.

6

Q. At the end, Mr. Hunt

7

asked at what point Dr. Carver had said in his

8

testimony that some of the digoxin had been missed

9

by Dr. Costigan and Dr. Mountsteven in their sweep  
of March 21st.

10

The answers to that are found in

11

Volume 35, on pages 6837 and 6838 in his evidence

12

in chief.

13

I'm reading at the bottom where

14

he explains that Dr. Costigan and Dr. Mountsteven

15

had taken an inventory of their own and that

16

Dr. Costigan had, prior to all the digoxin being

17

locked up, and they went through the whole Hospital,

18

he then goes on to say that Miss Rappaport did a

19

second inventory on the Sunday, and he says:

20

"...of what was locked up and what

21

else she could find. In a few

22

instances, she found that there

23

was some dig. that they didn't

24

find. Also, subsequent to that,

25

some digoxin appeared. She said

that a week later some appeared







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from Radiology, which is under-  
standable in trying to find out..."

"Q. Yes."

"A. She also removed the  
digoxin that had been locked up  
from the medication cabinet and  
replaced it with a set amount in  
each instance."

In cross-examination by Mr.  
Strathy on pages 6889, essentially, that same was  
repeated and Dr. Carver's evidence was that, no  
matter how hard they had tried to do it, they had,  
in fact, missed some digoxin.

THE COMMISSIONER: I just say that  
he did not quite say that. Those words were not --

MS. SYMES: That he had missed  
dixogin?

THE COMMISSIONER: Yes. Did he  
say that?

MS. SYMES: Yes.

THE COMMISSIONER: I did not hear  
you read it. Perhaps he did.

MR. ROLAND: To be fair to the  
doctor, it doesn't say he missed it where he looked for  
digoxin. There may have been some other locations





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where digoxin was found that one might not normally expect to find it. It does not say that he looked in the normal locations where one expects to find it, and missed it there.

THE COMMISSIONER: All right. I do not want to make a large issue of this matter anyway. Miss Symes, just carry on.

MS. SYMES: Q. In your Exhibit 205, the copy that we have been given is not legible down the left-hand side. Could you please assist me in reading the first column beneath "7D".

A. The next ward is 7E; the next ward is 7A; the next ward is 7F. The next ward is 7G and that last one is the Transport Team on 7G. That is a specialty team that go out and collect babies from maternity hospitals who are in need of intensive care.

Q. You had said in your evidence to Mr. Lamek that, at the meeting on Saturday, March 21, with Dr. Carver and the nursing supervisor, that there was an observation - you are not sure who it was made by - that the nursing teams were the same on Pacsai and Miller; is that correct?





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A. Yes.

Q. You are not sure whether  
it was your observation or someone else's?

A. Yes, that is correct.

Q. But was it your under-  
standing or your idea as well that the nursing  
teams were the same? Did you agree with that?

A. Yes. That is my  
recollection.

Q. I believe, by review of  
the patient's chart, Kevin Pacsai was on Ward 4B  
before he was transferred to the ICU?

A. Yes.

Q. That is your recollection  
as well?

A. Yes.

Q. Whereas, Allana Miller  
was on Ward 4A at the time she died?

A. Yes.

Q. You told me before that  
there were two wards and two separate nursing teams;  
one for each 4A and 4B.

A. Yes. But I think it is  
fair to say it was quite common for them to cross  
over. I am not quite sure whether they actually





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formally crossed over and covered opposite sides,  
but they certainly helped one another out in times  
of busy situations or whatever.

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Q. Just so I can understand  
how this conclusion was reached on March 21, did you  
go through the nursing assignment sheets to see  
whether or not this thought was correct, or was it  
just left as an impression?

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A. We did not go through  
any assignment sheets. I don't think that the  
nursing supervisor had those present at the meeting.  
That is my impression.

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Q. You would agree with me  
then that, if the children were in different wards,  
it was likely that they were cared for by different  
teams? That is, the team on duty would be a  
different team?

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A. Well, the nurses that  
were looking after Kevin Pacsai on the Thursday  
morning --

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Q. That is, early Thursday  
morning?

A. Yes. -- were the same  
nurses who were on the opposite side on Ward 4A on  
the Saturday; so, I don't know which ward was their







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home, but I know they were in two different places.

Q. You made that observation; that the nurses who had cared for Baby Miller were the opposite team from those who had cared for Kevin Pacsai?

THE COMMISSIONER: That is not what he said. He said exactly the opposite. He said they were the same nurses but in different wards.

MS. SYMES: I'm sorry. I tried to say it exactly the same as Dr. Costigan has; that is, the nurses that were caring for Allana Miller were the nurses that were opposite on Kevin Pacsai.

A. I think if you listen to what I say it might be easier.

Q. All right.

A. The nurses that were looking after Kevin Pacsai were the same nurses who I observed on the Saturday looking after Baby Cook. So, I don't know which ward was their home ward --

THE COMMISSIONER: Was it Cook or was it Miller?

THE WITNESS: It was Cook. It was Baby Cook. I did not really see Baby Miller. So, I am just saying that this was not an unusual





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occurrence, in my experience; that the nurses would be in different places across the ward.

MS. SYMES: Q. Just to follow up on that, Justin Cook was on 4A; he was in 418?

A. Yes.

Q. And Kevin Pacsai was on 4B?

A. Yes.

Q. That would normally follow that they would be different nursing teams?

A. I am telling you -- I think what the theory is; yes, they are two different nursing teams but, I am saying that the experience is that I have seen, in that particular instance I remember exactly but, even before that I was aware of nurses crossing over and working on different sides. I'm using that as an example of those two babies. One was Baby Pacsai, who was on 4B and was being looked after by the same group of nurses who were looking after Baby Cook on Saturday on 4A. I do not know which one was their home base, but --

Q. The nurses that were on the team, it is my information that the nurses that were on the team for Baby Pacsai were Miss





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Halpenny, Miss Howard-Jones, Miss Reaper, Mrs. Lyons, Miss Nelles; whereas, the nurses who were caring for Baby Cook - that is, on the team of nurses to which Baby Cook was assigned - were Nurse Trayner, Nelles, Christie and Brownless.

A. I guess my interpretation is I knew the team from those two girls --

Q. Only one of those nurses is common.

A. Miss Nelles, I guess. Yes, but I knew certainly Nurse Nelles and Nurse Trayner that were attached to the one team.

Q. Would you agree with me from what I have just read to you that it was not the same nurses who were looking after both children?

A. Yes. It sounds like it was just Nurse Nelles who was looking after Pacsai.

Q. And you said you were not particularly involved with Allana Miller, so you had not made any particular observation as to who was caring for her?

A. No.

MS. SYMES: Those are my questions.

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THE COMMISSIONER: Mr. Knazan.

CROSS-EXAMINATION BY MR. KNAZAN:

Q. Doctor, I represent Mrs. Christie, who was the nursing assistant on what is called the Trayner team.

I understand you only counted the injectible or intravenous digoxin on the ward?

A. Yes.

Q. And did you also take it to the nursing station to be locked up where you found it?

A. Yes.

Q. You did not count the oral digoxin at all?

A. No. It was very difficult to do that because there were bottles partly used. It would have been very difficult to quantitate.

Q. Did you look for that digoxin?

A. In what sense, look for it?

Q. I understood this inventory was searching it out so it could be locked up and counted, perhaps incorrectly.

A. Yes, parenteral digoxin.







DD10

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Q. But you did not search  
out the oral digoxin?

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A. No.

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Q. So, that digoxin would  
have been left on the floor, if there was any?

6

A. Yes.

7

Q. Perhaps, that even could  
have accounted for the difference between your

8

9

count and --

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A. No. Because I think  
the difference is purely in the parenteral form.

11

12

Q. If you refer to Exhibit  
185, if you still have that.

13

A. Yes.

14

Q. Miss Rappaport's inventory.

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On the third page, the first page of the chart -  
perhaps you can assist me in reading it --this is  
not your document but I understand you received  
a copy, since your name is on the covering letter.

16

17

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A. Yes.

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Q. Under both columns,  
"Stock removed" and "Stock dispensed", they seem  
to refer to pediatric elixir.

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A. Yes.

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Q. Is that not the oral

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digoxin?

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A. Yes.

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Q. When she did her

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inventory, she was concerned with oral digoxin?

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A. Yes.

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Q. Whereas, you were not

8

when you did it that night?

9

A. Yes.

10

Q. Would it be correct to

11

say that your inventory that night was purely

12

preventive? It was not an investigative search;

13

it was prophylactic - you were trying to stop

14

something from continuing?

15

A. It was difficult to

16

know what function -- I guess it was to try and

17

prevent the use of the injectible form of digoxin

18

by unauthorized persons.

19

THE COMMISSIONER: I take it,

20

though, that the oral digoxin was left on the --

21

where was it?

22

THE WITNESS: In its usual place.

23

It was kept, usually, in the medicine room.

24

THE COMMISSIONER: That was locked

25

up or not locked up?

THE WITNESS: No, that was not





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locked up.

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THE COMMISSIONER: I'm sorry, what would prevent that from being used by unauthorized persons?

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THE WITNESS: The only thing that prevented it, I don't know, really, it had to be double-signed for, but it was not physically possible to lock up all the oral digoxin in the narcotics cupboard.

10

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THE COMMISSIONER: Why not? Was there too much, do you mean? Why was it not physically possible?

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THE WITNESS: I guess, at the time when we decided to lock up the digoxin, we decided to concentrate on the parenteral form. I cannot remember exactly why but maybe we thought it was very difficult to keep the stock of the --

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THE COMMISSIONER: It is not a question of keeping a stock of; it is a question of keeping it out of unauthorized hands. It doesn't seem to be much good to lock up one type of it and not lock up the other. It may be more difficult for unauthorized persons to administer it orally. I don't understand the process of thought.

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What is the number of that





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confidential document, 160 something - the  
instructions that Dr. Carver --

MS. SYMES: Exhibit 165.

THE COMMISSIONER: Exhibit 165.

Thank you.

If you look -- Could I have  
Exhibit 165 in front of the witness, please.

This was the document that  
apparently was dictated by Dr. Carver but would not  
have been typed probably until the Monday, "All  
digitalis will become a controlled drug immediately  
and be treated as a narcotic. All digitalis  
preparations in the Hospital will be locked in a  
narcotics cabinet."

All I am really trying to find out  
is why you made the distinction between the oral  
and the other digoxin?

THE WITNESS: My understanding of  
what was decided that night was that we were to  
do an inventory of the parenteral forms and lock  
up the parenteral forms and were to initiate the  
double-signing of the digoxin orders.

THE COMMISSIONER: Thank you.

MR. KNAZAN: Q. Returning to  
Baby Pacsai, when you made the decision with Dr.







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Lynn to transfer him to ICU at 5:30 or so, it was for medical and social reasons. Is that what your testimony was?

A. Well, for medical reasons, yes, and social may not be an appropriate word.

Q. No. But in the sense you used it.

A. To take the sense in general of the situation on the wards.

Q. And that was because of the previous arrest and death earlier?

A. Yes.

Q. So, you were concerned with all of the nurses?

A. I was concerned that there was a high level of anxiety on the ward at the time.

Q. Both sides, 4A and 4B?

A. I was mainly dealing with the side 4B.

Q. So, although there are indications of instability which justify transferring him to ICU, you thought his condition was stable after that point; is that correct?

A. Once he came down to





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Intensive Care, he seemed to be quite stable.

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Q. And you accompanied him

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down?

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A. Yes.

6

Q. And that was sometime

between 5:30 and 6:00?

7

A. I can't be sure of the

8

time, but it was about that time.

9

Q. And until 8:45, once

10

you were down in ICU, there was nothing to be

11

concerned about, until arrest?

12

A. Apart from the high

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potassium level that we got in the results from

the laboratory.

14

Q. But as far as the way

15

he presented, those symptoms?

16

A. In Intensive Care, he

17

was stable, yes.

18

Q. So, there was about

19

three hours of stability before arrest?

20

A. Yes.

21

Q. Once down in the ICU,

you changed the IV yourself; is that correct?

22

A. Was that as soon as you

23

arrived down at ICU?

24

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A. Very shortly after, yes.

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Within fifteen or twenty minutes.

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Q. And you don't recall

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what you did with the IV equipment that you dismantled?

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A. In all the processes

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we have a nurse helping and what you do is you

8

insert the cannula and you take samples and the

9

nurse gives you whatever intravenous you order

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down there, and it is connected up, and then the other

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one is taken down.

12

Q. Why did you change the

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IV?

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A. I can't remember speci-

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fically, but the most likely thing was that it was

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a small butterfly - a smallish -- and the situation

17

when you have a patient in the Intensive Care Unit,

18

you like to have a good intravenous for all patients

19

who are a little unstable, or whatever.

20

Q. So, it was not through

21

any concern at that time that something was

22

improper about the original IV that was up on the

23

ward?

A. No.

24

Q. Since that time, you

25





1  
DD17 2 have acquired somehow the knowledge that decreasing  
3 the potassium level can aggravate a situation of  
4 digoxin toxicity; is that correct?

5 A. I think I had that know-  
6 ledge at the time.

7 Q. You had that knowledge  
8 at the time?

9 A. Yes.

10 Q. But you continued to  
11 take the steps to decrease the potassium, notwith-  
12 standing your query about digoxin toxicity?

13 A. Yes. Well, in discussion  
14 with Dr. Schaffer and because of the magnitude of  
15 the high potassium.

16 Q. So, that was just a  
17 judgment call in that situation?

18 A. Yes, a judgment, yes.

19 Q. At some point, did you  
20 reject the sick sinus, the other differential  
21 diagnosis that you had marked down?

22 A. I think it is just the  
23 way things developed as time went on and we got the  
24 subsequent digoxin level.

25 Q. The subsequent digoxin  
level in Pacsai, in that baby?







DD18

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A. Yes.

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Q. So, your present view,

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as you testified today, is that that was the cause  
of death?

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A. That is my opinion, yes.

6

Q. Is that in any way

7

related to the results you learned about the  
digoxin levels in other babies?

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A. That was my impression

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at the time before I learned any other results of  
other babies.

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Q. So, just on the basis of

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the digoxin level, you rejected the other differential  
diagnosis which you had had that night?

14

A. Yes.

15

Q. Just with reference to

16

Miss Symes' questions, if I understand the resolution  
of that it is that you were using the idea of  
nursing teams to mean one nurse; is that right?

18

19

A. I was under the impression

20

that - I guess it was a mistaken impression - that  
because Nurse Nelles was on 4B, that that team was  
on 4B that night.

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THE COMMISSIONER: I'm still

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not quite sure which was which, but I am not going

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to worry too much about it because we are going to have masses of more evidence, I would think, on what nurses were on what team and when, but I am not sure whether we are talking about Miller or we are talking about Cook.

MR. KNAZAN: We're talking about Pacsai.

THE COMMISSIONER: I know we are talking about Pacsai but I'm not sure whether we are talking about Miller or Cook.

MR. KNAZAN: Q. Well, at the Saturday meeting, March 21st, Cook had not died yet and you testified to Mr. Lamek that your own impression at that meeting was that there was the same nursing team for the two deaths that you were concerned about.

A. No. My impression from the meeting was that that came up - I cannot remember who brought up that point.

Q. You shared that impression?

A. Yes.

Q. And you had no knowledge of Estrella at that time?

A. No.

Q. So, it was just based on





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those two deaths?

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A. That is my recollection  
of what went on at the meeting, yes.

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Q. And the nursing super-  
visor did not have the charts at that time?

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7

A. From my memory, she did  
not.

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9

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Q. Just in reference to  
Mr. Young's questions, when you said that you had  
recalled an incident of a certain nursing team  
being upset about another death --

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A. Yes.

13

14

Q. -- whose name you cannot  
recall, were you using "team" in the sense of  
four nurses or five nurses or two nurses, when  
you gave that answer?

15

16

A. My impression was about  
two or three nurses in the conference room.

17

18

Q. Can you recall any of  
those, other than the ones you named?

19

20

A. The only two that I  
could remember were, I guess, Nurse Nelles and  
Nurse Trayner.

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22

23

Q. With regard to Baby Hines,  
you had to do some persuasion to obtain the permission

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of the parents for an autopsy; is that right?

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A. Explanation or -- Yes.

4

Q. At some point you were

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trying to just settle for a partial autopsy and,

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finally, you prevailed upon them to allow a

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complete autopsy.

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A. Yes. Well, I explained that was an option, you know, it was a natural thing to do, it was the area I was interested in and if they had problems about having a complete autopsy which is not I guess unusual.

Q. And if they had not agreed I presume you knew the options that were open to you that we have heard so much about, you are aware of the Coroner's Act?

A. Yes. Usually you don't ask permission in the coroner's case, that had already been asked for.

Q. So my question which I will tell you is, would you have considered that a coroner's case had the parents denied you the permission?

A. Yes, I think so, yes.

Q. So it was unexpected you would have thought to report it to the coroner?

A. It was unusual, yes.

MR. KNAZAN: Thank you.

THE COMMISSIONER: Thank you.

Mr. Olah?

MR. OLAH: Thank you, Mr. Commissioner.  
May I have your indulgence for a moment,  
Mr. Commissioner?





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THE COMMISSIONER: Yes.

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CROSS-EXAMINATION BY MR. OLAH:

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Q. Doctor, I act on behalf of

5

Janet Brownless, one of the Registered Nursing

6

Assistants on the team, the Trayner team that we

7

have been talking about. A couple of preliminary

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questions.

9

From Exhibit 205, it is unclear to me

10

whether you carried out a search for digoxin in

11

the radiology section of the Hospital and the OR.

12

Could you advise me whether you did or did not?

13

A. I did not carry out a search

14

in the radiology or the OR.

15

Q. So if Miss Rappaport found

16

digoxin in those areas on the following day, I take

17

it that is because no search was conducted in those

18

areas?

19

A. That is correct.

20

Q. Now, I was wondering if you

21

could take for a moment the Pacsai chart, Exhibit 106,

22

and there is a number of strips at the beginning of

23

the chart. It is Exhibit 106, Mr. Commissioner.

24

You have talked about the strip, the ECG strip that

25

you had in your hand that you took with you to ICU.

26

Can you identify by any chance which strip it was

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28





1  
2 that you had with you and whether it is contained in  
3 the chart?

4 A. No, it is impossible to.

5 Q. Well some of them are dated,  
6 but some of them are undated. I noticed on page 17  
7 and page 19 of the chart, or medical records,  
8 Mr. Commissioner, that there are some unusual  
9 indications there. I'm just wondering whether either  
10 of those are possibly the strips that you were  
examining that morning?

11 A. I can't be sure.

12 Q. I have had some evidence,  
13 Doctor, about strips, and about the fact that digoxin  
14 may affect the length of the interval between the  
15 P wave and the beginning of the QRS wave. Did you  
16 observe anything like that on the strip that you  
17 had in your hand when you went down to ICU that  
morning?

18 A. Yes, I wrote in my note I  
19 thought it was prolonged.

20 Q. That is the ST segment, is it?

21 A. PR interval.

22 Q. Is that the same thing as the  
23 ST segment?

24 A. No.  
25

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Q. That is something different?

A. Yes.

Q. And that was one of the considerations that you had in mind when you reached the conclusion that one of the differential diagnosis may be digoxin toxicity?

A. Yes, it was one of the considerations, yes.

Q. Now, I understand that in fact when you got the baby down to ICU the baby looked quite well?

A. Yes.

Q. And you didn't expect a death, or anything unusual to happen after his transfer down to ICU?

A. Well, I felt, you know, happy that he was more stable than he had been on the ward by the history of what he had.

Q. You really had no serious concerns once you had him transferred down to ICU?

A. Well, I had concerns because I stayed with him and I was around from then until the arrest. But what I was saying was clinically on the strips he appeared to be stable from the time I brought him down until the time that he







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arrested.

Q. I would like to then turn your attention to something a little different. This is the CBC blood sample that you discussed with Mr. Lamek. As I understand it there were at least two samples taken that morning; one was taken after the transfer to ICU, about 6:30 in the morning, this would be the morning of the death?

A. Yes, that would be the sample that I took.

Q. That is the sample you took?

A. Well, I'm not sure which one but you know I did take a sample shortly after the baby was transferred to the ICU.

Q. That is the first sample you took?

A. For CBC, yes.

Q. I guess what I am having trouble distinguishing is were there different samples taken for electrolytes and CBC; were there three samples taken or two samples taken?

A. There was two venae punctures, you know what I mean, the actual vein was entered twice. The first was to change the intravenous and obtain the first electrolyte sample and the CBC.





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Q. Let me stop you there for a moment, what time was that approximately?

A. Very shortly, as I said very shortly after I brought the child down to the Intensive Care Unit.

Q. Okay.

A. So it was within 15 or 20 minutes after his arrival.

Q. Now was that sample used for just electrolytes, or electrolytes and CBC?

A. Yes, that is what I was saying, the sample was used for electrolytes and CBC.

Q. Now, you were unhappy with the results, or you were concerned about the potassium results from the first sample and so you took a second sample after it was reported to you around 7:30 in the morning, and that sample was taken what, about 15 or 20 minutes later?

A. It was taken immediately after I received the result I guess of the first sample.

Q. And can you tell us approximately what time that second sample was taken?

A. I can't, I would have to judge by what time I received the first sample, you know,





EE7 1  
2 I can't.

3 Q. Perhaps I can assist you by  
4 taking you to the chart. I am not sure if this  
5 will assist you. It is Exhibit 106, Mr. Commissioner.  
6 Have you got the chart there, Doctor?

7 A. Yes.

8 Q. Page 81.

9 A. Yes.

10 Q. That says that the sample,  
11 the first sample was collected at 6:30 a.m. Do you  
12 have any recollection as to how soon after the  
13 collection, that is the first sample, that you  
14 received the message from the laboratory as to the  
high 11.2 potassium result?

15 A. 9.0.

16 Q. I am sorry, 9.0, you are right,  
17 Doctor.

18 A. My impression was that it was  
19 within, between half and three-quarters of an hour  
later.

20 Q. So it would have been about  
21 7:00 or 7:15 that you were advised?

22 A. Yes.

23 Q. And you took the second sample  
24 at that time?  
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A. Yes.

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Q. So then we can be sure that

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the second sample was taken at about 7:00 or 7:15

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that morning?

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A. That seems fair to say, yes.

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Q. Now was there - which was

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the sample that was used for the CBC purposes that

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we have discussed, was it the first sample or the

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second sample?

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A. As far as my knowledge there

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was no blood sent for a repeat CBC, so there was

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only one CBC taken and that was the first sample.

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Q. So that would have been the

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sample that was taken at 6:30 a.m.?

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A. Yes.

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Q. Thank you. Now you were

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concerned about the use of that CBC sample for

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purposes of digoxin testing as I recall?

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A. Yes.

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Q. And was that because of the

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container in which the CBC sample was placed?

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A. Yes.

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Q. What was so unusual about that

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container that would create alarm or concern in your mind?

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A. It was just that it was not the normal method of collecting blood for digoxin estimation. What normally happens is that that blood is kept anticoagulated, and kept liquid, whereas the samples that are sent for serum digoxin are samples that are performed on serum after the cells had been removed.

Q. Now, just going back to that first sample that was taken about 6:30 a.m. Were there two separate extractions used, one for the electrolyte test and the second one for the CBC?

A. What I did was I put in the cannula for the new intravenous attached a syringe and the first syringe probably was a heparinized syringe, which is a syringe which calls for electrolytes or whatever, and then I would get another syringe and take a second container of blood and put it into the CBC tube.

Q. So you had two identical and equal samples?

A. Well not equal in volume, because the CBC is quite small in relation to the size that we take for electrolytes.

MR. OLAH: Mr. Commissioner, I notice it is 4:30 and I am going to be a while yet, would





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you like me to continue?

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THE COMMISSIONER: Well finish whatever it is, this subject, if you can, so you can start a new subject, are you finished with this subject?

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MR. OLAH: I have just a couple more questions on the subject.

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THE COMMISSIONER: Yes, all right.

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MR. OLAH: Q. So other than the shape of the vessel in which the blood was placed the CBC sample, that was the only concern that you had with respect to that sample?

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A. It contained an anticoagulant that is not normally used in the transport of blood for digoxin estimations.

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Q. And you were concerned that that anticoagulant might affect the ultimate testing?

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A. Yes, I had never performed a digoxin estimation on that type of tube. You know what I mean, it was a tube that was specifically designed only for CBC. It went to a different department, it went to hematology, whereas the other sample went to biochemistry.

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Q. Any other basis for your concern other than that?

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A. No.

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MR. OLAH: Thank you, those are my questions related to that area.

THE COMMISSIONER: Can you help us by telling us how long you will be in the morning?

MR. OLAH: I will be about 15 minutes.

THE COMMISSIONER: Mr. Labow?

MR. LABOW: I will also be about 15 minutes, Mr. Commissioner.

THE COMMISSIONER: Mr. Tobias?

MR. TOBIAS: About 15 minutes, Mr. Commissioner.

THE COMMISSIONER: And Mr. Shanahan?

MR. SHANAHAN: I should be about 15 minutes, too, Mr. Commissioner.

THE COMMISSIONER: Mr. Shinehoft?

Mr. Shinehoft, I don't see how you can be anything but 15 minutes. That is what everybody else is doing. How long are you going to be?

MR. SHINEHOFT: I have never said anything in 15 minutes, I may be up to an hour but I shouldn't be hopefully any longer than an hour.

THE COMMISSIONER: All right. I think it looks as though we might manage by quarter to 12:00 if you could get Dr. Cutz by that time.

MR. LAMEK: I'm sorry, Mr. Commissioner?





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THE COMMISSIONER: It looks to me  
as though - no, I don't - I have no idea. Mr. Roland,  
are you going to be long?

MR. ROLAND: I have a few questions  
that have arisen but not that many.

MR. ORTVED: I have two.

THE COMMISSIONER: Well, I don't  
know.

MR. LAMEK: It doesn't sound to me  
Mr. Commissioner, as though we are going to be  
through much before 12:30 if Mr. Shinehoft's estimate  
is right.

THE COMMISSIONER: Sometimes we  
can speed Mr. Shinehoft up. Well now, I think if  
you could ask Dr. Cutz to be available but not here  
by 12:00.

MR. LAMEK: Maybe we should undertake  
to let him know by the break whether we need him or  
not tomorrow.

THE COMMISSIONER: Yes, would you do  
that.

MR. LAMEK: Yes.

---Whereupon the hearing adjourned until Thursday,  
October 6th, 1983 at 10:00 a.m.









